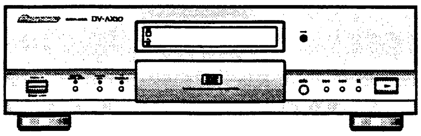
Pioneer

Service Manual



ORDER NO.
RRV2429

DVD PLAYER

DV-AX10

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Region No.
	DV-AX10		
KU/CA	○	120V	1

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols -■□- (fast operating fuse) and/or -■⊠- (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible -■□- (fusible de type rapide) et/ou -■⊠- (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

IMPORTANT
THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1.
SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.

LASER DIODE CHARACTERISTICS
FOR DVD : MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 655 nm
FOR CD : MAXIMUM OUTPUT POWER : 5mW
WAVELENGTH : 785 nm

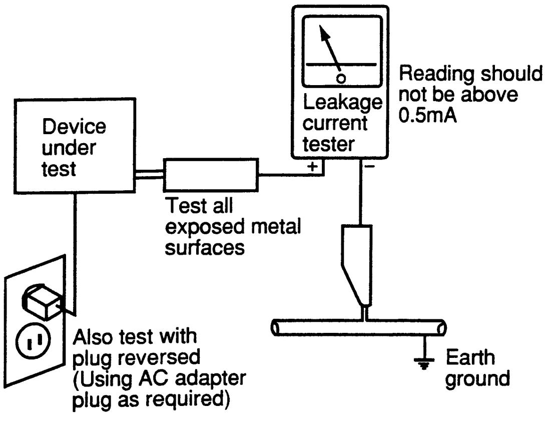
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Device under test
Leakage current tester
Reading should not be above 0.5mA
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−
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

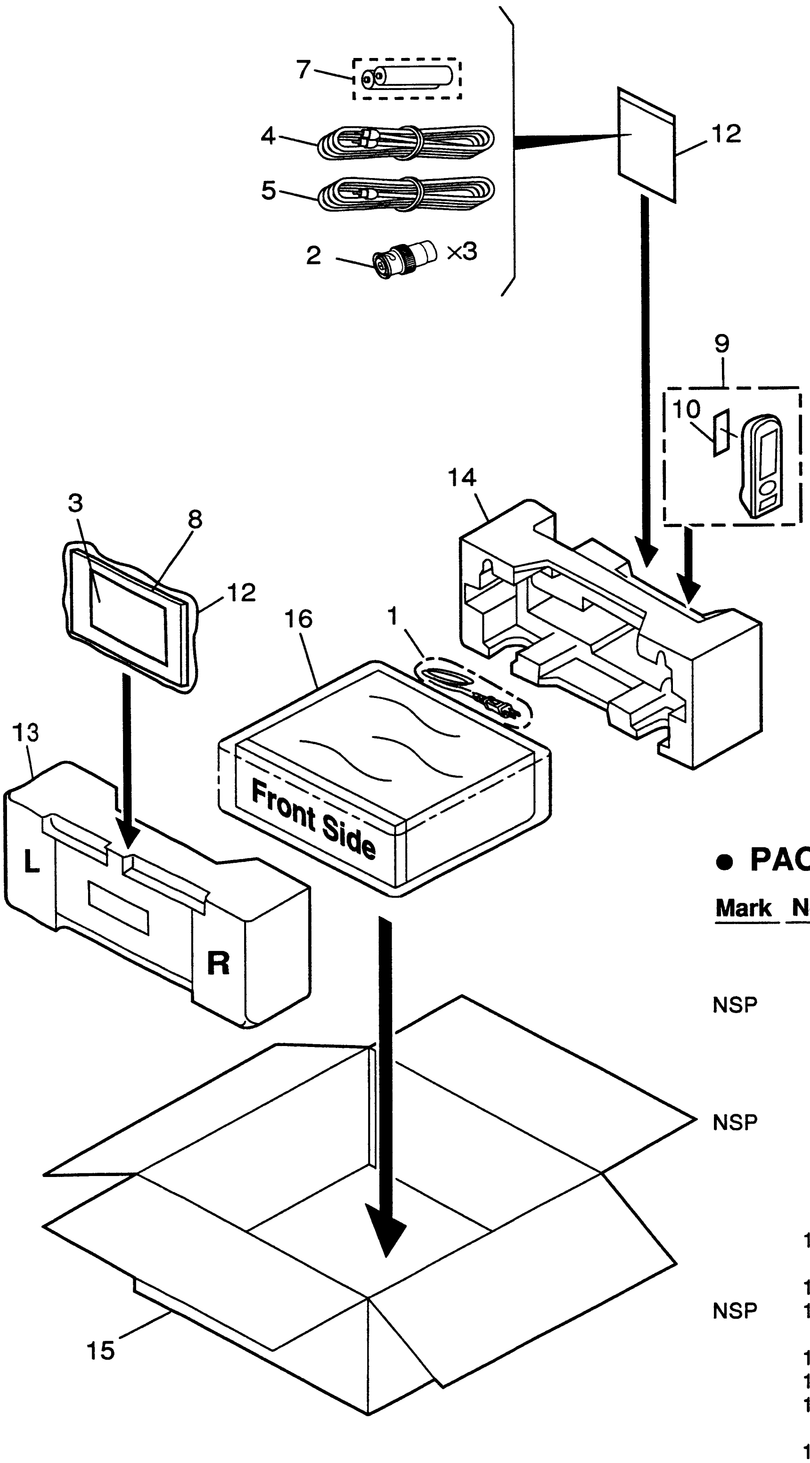
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on the product are used for disassembly.*

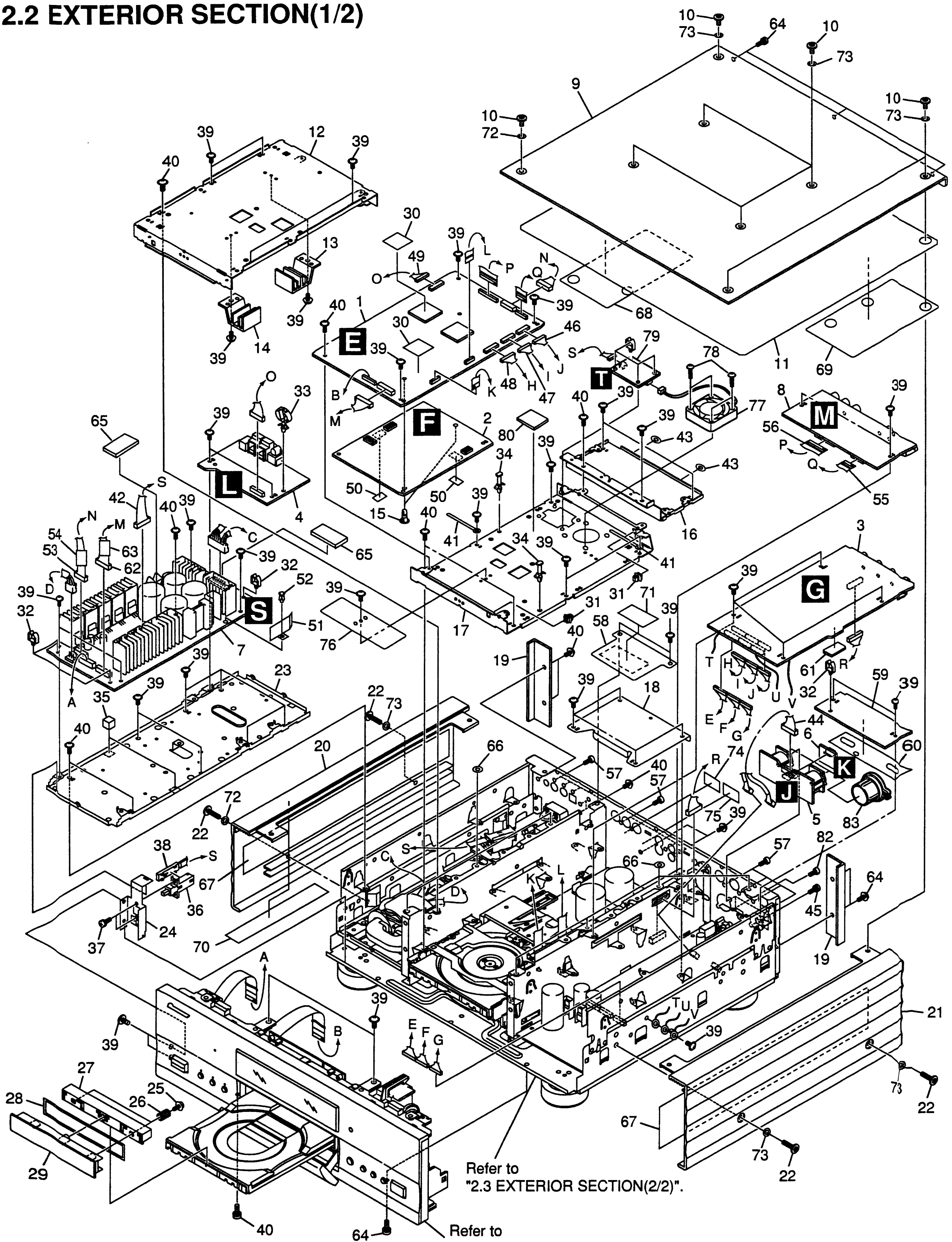
2.1 PACKING



• PACKING PARTS LIST

Mark	No.	Description	Part No.
	1	Mirror Mat Bag	VHL1004
	2	BNC to RCA/phono adapter	VKX1004
NSP	3	Warranty Card	ARY7045
	4	Audio Cord (L= 1.5m)	VDE1023
	5	Video Cord (L= 1.5m)	VDE1024
	6	• • • • •	
NSP	7	Dry Cell Battery (R6P, AA)	VEM-013B
	8	Operating Instructions (English/French)	VRB1223
	9	Remote Control Unit (CU-DV041)	VXX2631
	10	Battery Cover	VNK4422
	11	• • • • •	
NSP	12	Polyethylene Bag (0.03 x 230 x 340)	Z21-038
	13	Front Pad	AHA9016
	14	Rear Pad	AHA9017
	15	Packing Case	VHG1811
	16	Packing Sheet	AHG7008

2.2 EXTERIOR SECTION(1/2)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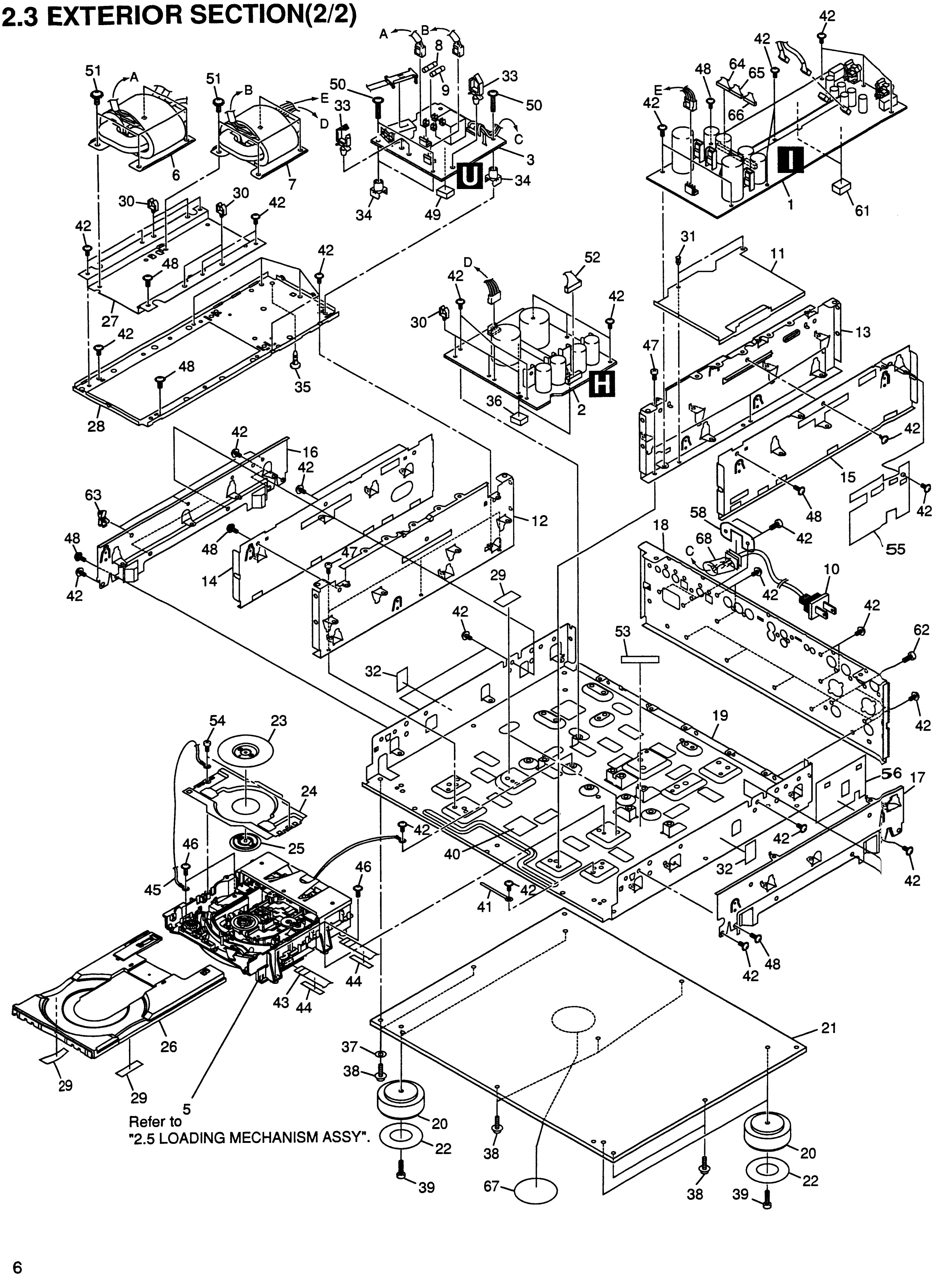
Refer to
"2.3 EXTERIOR SECTION(2/2)".

Refer to
"2.4 FRONT PANEL SECTION".

• EXTERIOR SECTION(1/2) PARTS LIST

Mark	No.	Description	Part No.
	1	DVDM Assy	VWS1475
	2	DSPB Assy	VWG2159
	3	MAUD Assy	VWV1735
	4	DOUT Assy	VWG2162
NSP	5	BLOUT Assy	VWV1743
NSP	6	BLSW Assy	VWG2170
	7	SYPS Assy	VWR1324
	8	VOUT Assy	VWV1760
	9	Top Plate	AAH7039
	10	SH Screw	PBA1049
NSP	11	Inside Plate	VNA2107
	12	Main Shield T	VNE2226
	13	AV1 Heat Sink	VNH1052
	14	FTS Heat Sink	VNH1053
	15	Locking Card Spacer	ONK1035
	16	Trans. Shield	VNE2138
	17	Main Shield B	VNE2227
	18	Shield Sheet M2	VEC2140
	19	Rear Mole	AAH7044
	20	Side Alum. L	AAH7040
	21	Side Alum. R	AAH7041
	22	Screw (4 x 20)	ABA7006
	23	Subchassis T	VNE2180
	24	PW-SW-Holder	VNE2204
	25	P Screw	VBA1057
	26	Door Spring	VBH1305
	27	Door Holder	VNK4605
	28	Door Packing	VEC2045
	29	Tray Panel	VNK4398
	30	Gap Pad	VEC1997
	31	Board Holder	DEC1231
NSP	32	Holder (B)	VEC1381
	33	Spacing Clip	VEC2133
NSP	34	Card Spacer	QEC1012
NSP	35	Spacer	DEC1316
	36	Switch	PSG1011
	37	Screw	PMA30P060FCU
	38	FLEX SW Wire	VDX1008
	39	Screw	ABA1011
	40	Screw	IBP30P090FCC
	41	Cord Clamper	RNH-184
	42	Housing Assy (3P)	VKP2241
NSP	43	Spacer	PNM1135
	44	Housing Assy (4 + 4/10P)	VKP2240
	45	Screw	PMA30P060FCU
	46	Housing Assy Assy (14P)	VKP2231
	47	Housing Assy Assy (13P)	VKP2233
	48	Housing Assy Assy (15P)	VKP2236
	49	Housing Assy Assy (15P)	VKP2229
	50	Rubber Spacer	REB1218
	51	Gaurd Sheet	VEC2146
	52	Rivet(Plastic)	VEC-213
	53	Housing Assy Assy (8P)	VKP2238
NSP	54	Shield Tube	VDM1003
	55	Flexible Cable (16P)	VDA1810
	56	Flexible Cable (28P)	VDA1811
	57	Screw	BBZ30P080FCC
	58	Shield Plate H	AMR7309
	59	SHLD Assy	VWR1321
	60	PCB Shield A	VEC2126
NSP	61	Spacer	VEC1532
	62	Housing Assy Assy (10P)	VKP2237
NSP	63	Shield Tube	VDM1004
	64	Screw	IBZ30PO80FCC
	65	Radiation Seat	VEB1314
NSP	66	Space	AED7043
	67	Shield Sheet A	VEC2127
	68	Shield Sheet B	VEC2128
	69	Shield Sheet C	VEC2144
	70	Shield Sheet D	VEC2145
	71	Fuse Caution Label	VRW1770
	72	Washer	WH40FUC
	73	Washer	WA40FO80M050
NSP	74	Label	VRW1629
NSP	75	ID Label	VRW1825
	76	Shield Sheet E	VEC2156
	77	DC Fan Motor	VXM1072
	78	Screw	BBZ30P150FMC
NSP	79	FANB Assy	VRW1325
	80	Sheet	VEX1022
	81	Screw	BBZ30P060FCC
	82	Screw	BMZ26P050FCU
	83	Cap	VEC2076

2.3 EXTERIOR SECTION(2/2)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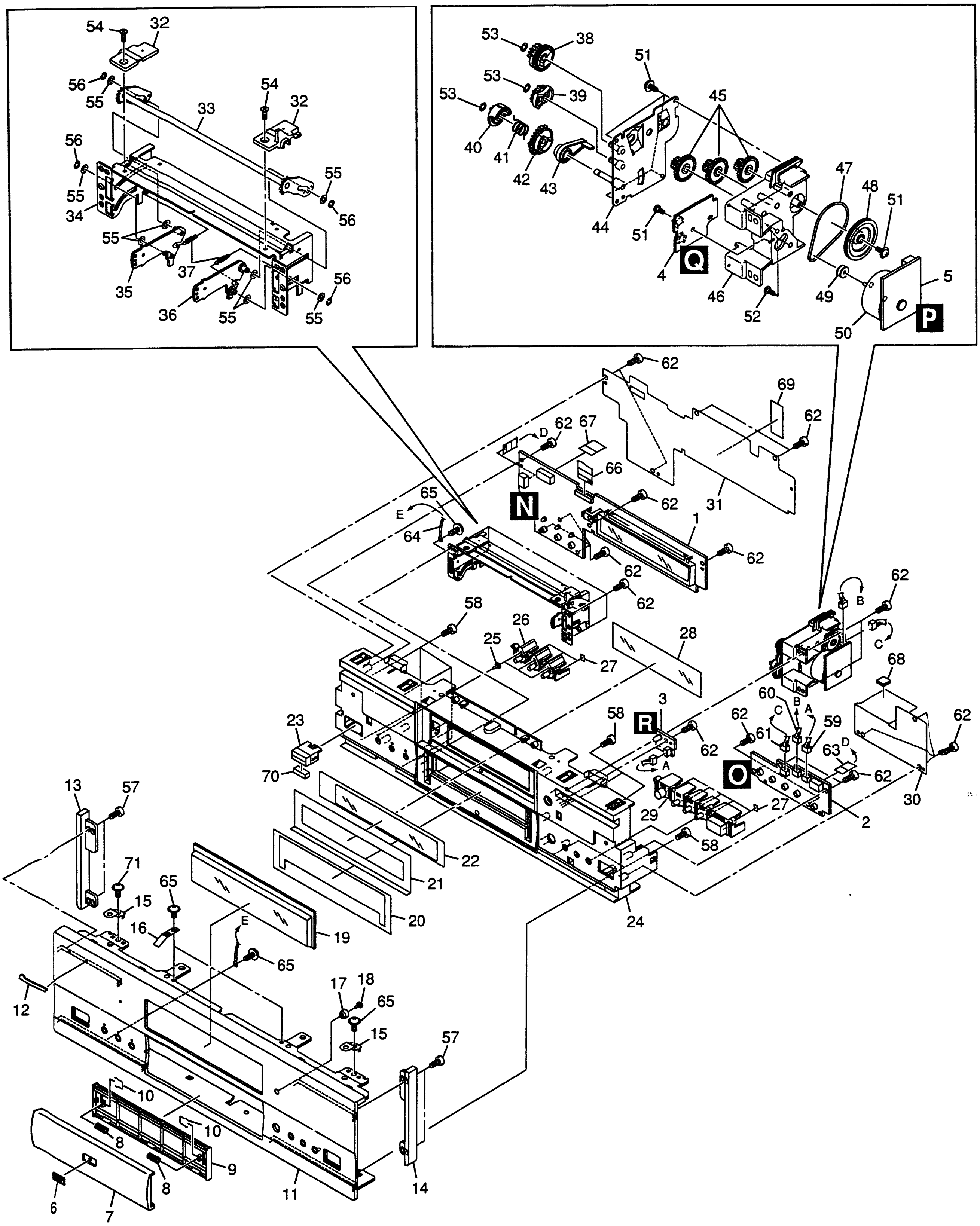
5
Refer to
"2.5 LOADING MECHANISM ASSY".

• EXTERIOR SECTION(2/2) PARTS LIST

Mark	No.	Description	Part No.
	1	AUDIO Assy	VWV1735
	2	MAPS Assy	VWR1322
	3	LSFB Assy	VWR1320
	4	• • • • •	
NSP	5	Loading Mechanism Assy	VWT1158
⚠	6	Main Power Transformer	VTT1161
⚠	7	Audio Power Transformer	VTT1162
⚠	8	Fuse (FU1 : 1A)	VEK1014
⚠	9	Fuse (FU2 : 2A)	VEK1019
⚠	10	AC Power Cord	VDG1046
	11	Shield Sheet P	VEC2060
	12	Side Wall L2	VNE2177
	13	Side Wall R2	VNE2178
	14	Side Suport A	VNE2183
	15	Side Suport B2	VNE2229
	16	Side Frame A	VNE2181
	17	Side Frame B	VNE2182
	18	Rear Panel	VNA2038
NSP	19	Under Base	VNA2040
	20	Insulator	ANL7013
	21	Buttom Plate C	VNA2171
	22	Cushion	AEC7224
	23	Clamper Plate	VNE2114
	24	Bridge	VNE2113
	25	Clamper	VNL1738
	26	Tray	VNK4243
	27	Trans. Plate	VNE2203
	28	Sub Chassis B	VNE2179
	29	Sheet	VEX1022
NSP	30	Holder (B)	VEC1381
	31	Rivet (Plastic)	VEC-213
	32	Tape (G)	REH1010
NSP	33	Wire Clip	DEC1450
NSP	34	PCB Mold	AMR1525
NSP	35	PCB Holder	PNW2029

Mark	No.	Description	Part No.
	36	Rubber Spacer	REB1218
	37	Washer	WH30FUC
	38	Schew	IBZ30P120FCC
	39	Schew	BBZ30P200FMC
NSP	40	Base Cushion	VEC1107
	41	Cord Clamper	RNH-184
	42	Schew	ABA1011
	43	Flexible Cable (12P)	VDA1813
	44	Spacer	VEB1319
NSP	45	Earth Lead Wire	DE007VF0
	46	Schew	IBZ30P080FCC
	47	Schew	BBZ30P060FCC
	48	Schew	IBP30P090FCC
NSP	49	Rubber Spacer	PEB1194
	50	Schew	IBZ30P180FCC
	51	Schew	VBA1056
	52	Housing Assy (8P)	VKP2239
NSP	53	Tape (K)	REH1011
	54	Schew	BPZ26P080FZK
	55	Side Shield L	VEC2124
	56	Side Shield R	VEC2125
	57	• • • • •	
	58	Power Cord Spacer	ANG1153
	59	• • • • •	
	60	• • • • •	
NSP	61	Rubber Spacer	REB1187
	62	Schew	BBZ30P080FCC
	63	Side Clamp	DEC2007
	64	Housing Assy (15P)	VKP2230
	65	Housing Assy (14P)	VKP2232
	66	Housing Assy (13P)	VKP2234
	67	UL Caution Card	AAX-313
	68	UL Tubing	VEC1651

2.4 FRONT PANEL SECTION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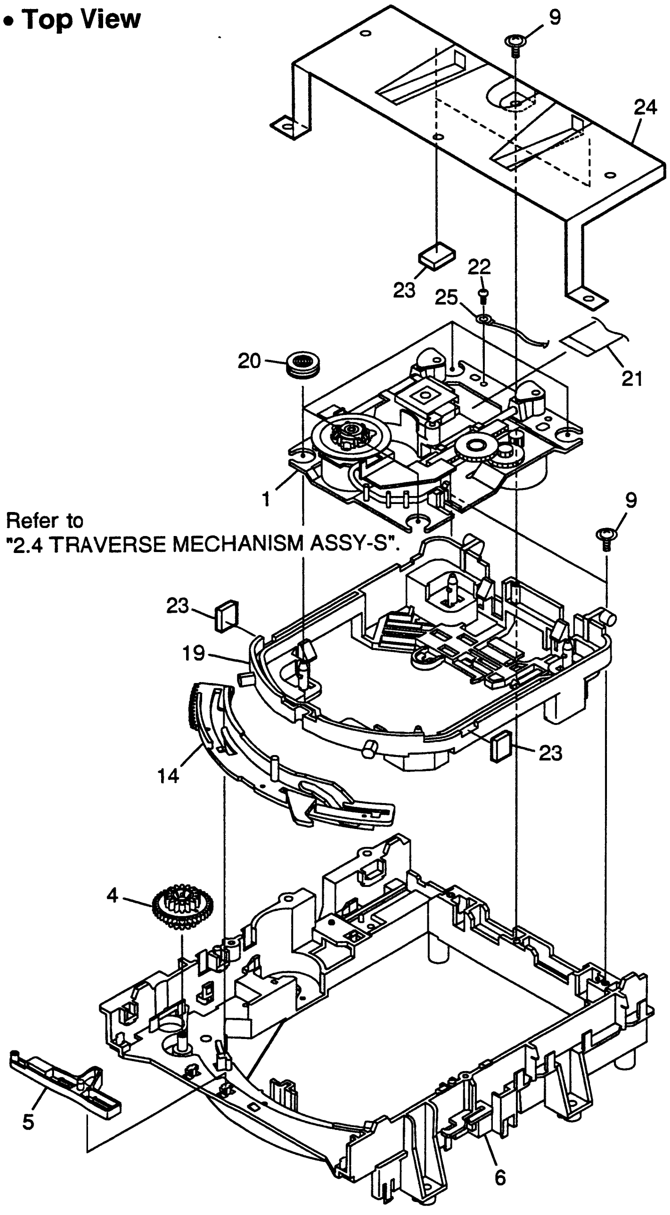
• FRONT PANEL SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	FLKB Assy	VWG2164
	2	PLSB Assy	VWG2166
NSP	3	LEDB Assy	VWG2167
NSP	4	DRSB Assy	VWG2168
NSP	5	DRMB Assy	VWG2169
	6	DVD Plate	VAM1096
	7	Door Aluminum	VAH1307
	8	Earth Spring	VBH1310
	9	Door Base	VNK4396
	10	Clip (SUS)	VBM1003
	11	Front Aluminum	VAH1306
	12	Name plate G	PAN1377
	13	Side Panel L	AAH7042
	14	Side Panel R	AAH7043
	15	Top Stay	VNE2139
	16	Earth Plate	VBK1075
	17	DVD Ring	VAK1008
	18	DISP Lens	PNW2113
	19	FL Lens C	VEC2034
	20	Shield Cushion	VEC2036
	21	Inner Aluminum	VAH1311
	22	FL Lens S	VEC2085
	23	Power Button	VNK4888
	24	Panel Base	VNK4390
	25	LED Lens	VNK4400
	26	Function Key	VNK4394
	27	Tape	PNM1017
	28	FL Filter	VEC1965
	29	Main Key	VNK4392
	30	Shield Sheet S	VEC2039
	31	Shield Sheet L	VEC2038
	32	Drive Shaft Holder	VNL1791
	33	Drive Arm Assy	VXA2364
	34	Door Support	VNE2140
	35	Drive Arm L Assy	VXA2362

Mark	No.	Description	Part No.
	36	Drive Arm R Assy	VXA2363
	37	Door Spring B	VBH1300
	38	Drive Gear A	VNL1792
	39	Drive Gear B	VNL1793
	40	Drive Gear D	VNL1795
	41	Door Spring A	VBH1299
	42	Drive Gear C	VNL1794
	43	Switch Arm	VNL1797
	44	Gear Base Assy	VXA2365
	45	Gear (C)	VNL1047
	46	Moter Holder	VNL1796
	47	Belt (Rubber)	PEB1288
	48	Gear Pulley	VNL1733
	49	Moter Pulley	PNW1634
	50	DC Moter 0.75W (DISC DOOR)	PXM1010
	51	Screw	Z39-019
	52	Screw	BMZ26P040FMC
	53	Washer	WT31D054D050
	54	Screw	CBZ26P060FMC
	55	Washer	WA32D080D025
	56	Washer	WT26D047D050
	57	Screw	ABA7017
	58	Screw	BBZ30P080FZK
	59	Connector Assy	PG03KK-E07
	60	Connector Assy	PG03KK2E07
	61	Connector Assy	PG03KK4E07
	62	Screw	BPZ30P080FCC
	63	Flexible Cable (8P)	VDA1814
NSP	64	Earth Lead Wire	DE005VF0
	65	Screw	ABA1011
	66	Flexible Cable (19P)	VDA1809
	67	Flexible Cable (13P)	VDA1812
	68	Spacer	VEC-244
NSP	69	Tape (K)	REH1011
	70	Block	ANL7015
	71	Screw	IBP30P090FCC

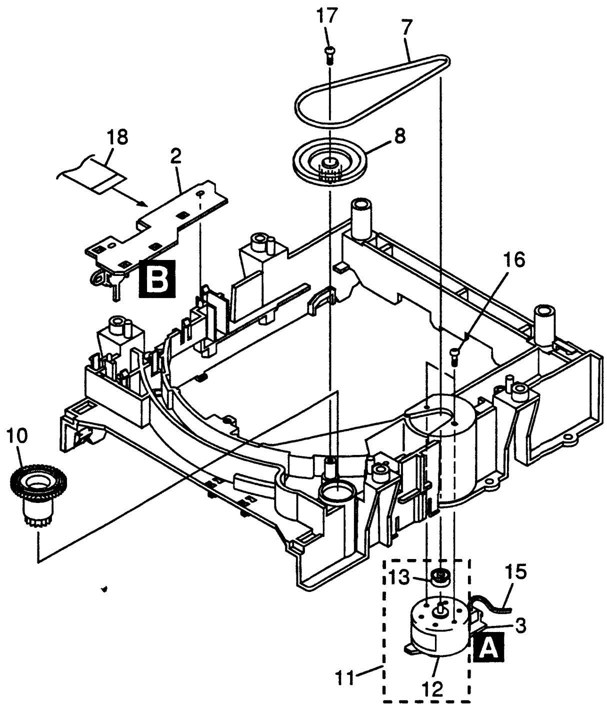
2.5 LOADING MECHANISM ASSY

- **Top View**



Refer to
"2.4 TRAVERSE MECHANISM ASSY-S".

- **Bottom View**

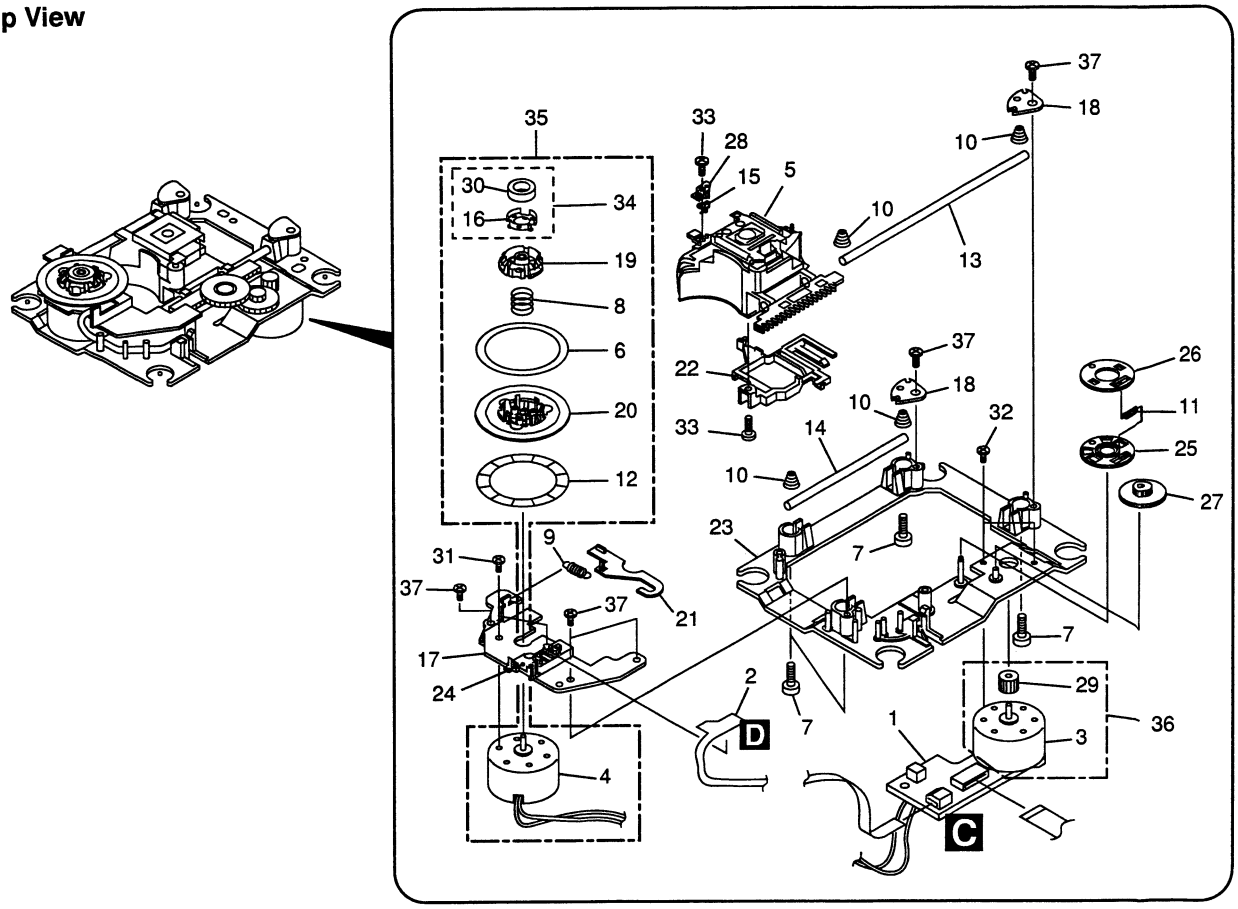


● LOADING MECHANISM ASSY PARTS LIST

Mark	No.	Description	Part No.
	1	Traverse Mechanism Assy-S	VXX2653
NSP	2	LOSB Assy	VWG1885
NSP	3	LOMB Assy	VWG1886
	4	Drive Gear	VNL1735
	5	Lock Plate	VNL1820
	6	Loading Base	VNL1844
	7	Belt	VEB1260
	8	Gear Pulley	VNL1733
	9	Screw	DBA1006
	10	Loading Gear	VNL1734
	11	Loading Motor Assy	VXX2505
	12	DC Motor / 0.3W (LOADING)	PXM1027
	13	Motor Pulley	PNW1634
	14	Drive Cam	VNL1736
	15	Connector Assy (LOMB CN401 ↔ LOSB CN303)	VKP2198
	16	Screw	VBA1055
	17	Screw	Z39-019
	18	Flexible Cable (08P) (LOSB CN302 ↔ SMEB CN202)	VDA1698
	19	Float Base	VNL1867
	20	Floating Rubber	VEB1286
	21	Flexible Cable (24P) (Pickup Assy ↔ DVDM CN120)	VDA1804
	22	Screw	PBZ26P050F CC
NSP	23	Stop Cushion	VEC1605
	24	Tray Stabilizer	VNE2210
NSP	25	Earth Lead Wire	DE010VF0

2.6 TRAVERSE MECHANISM ASSY-S

- **Top View**

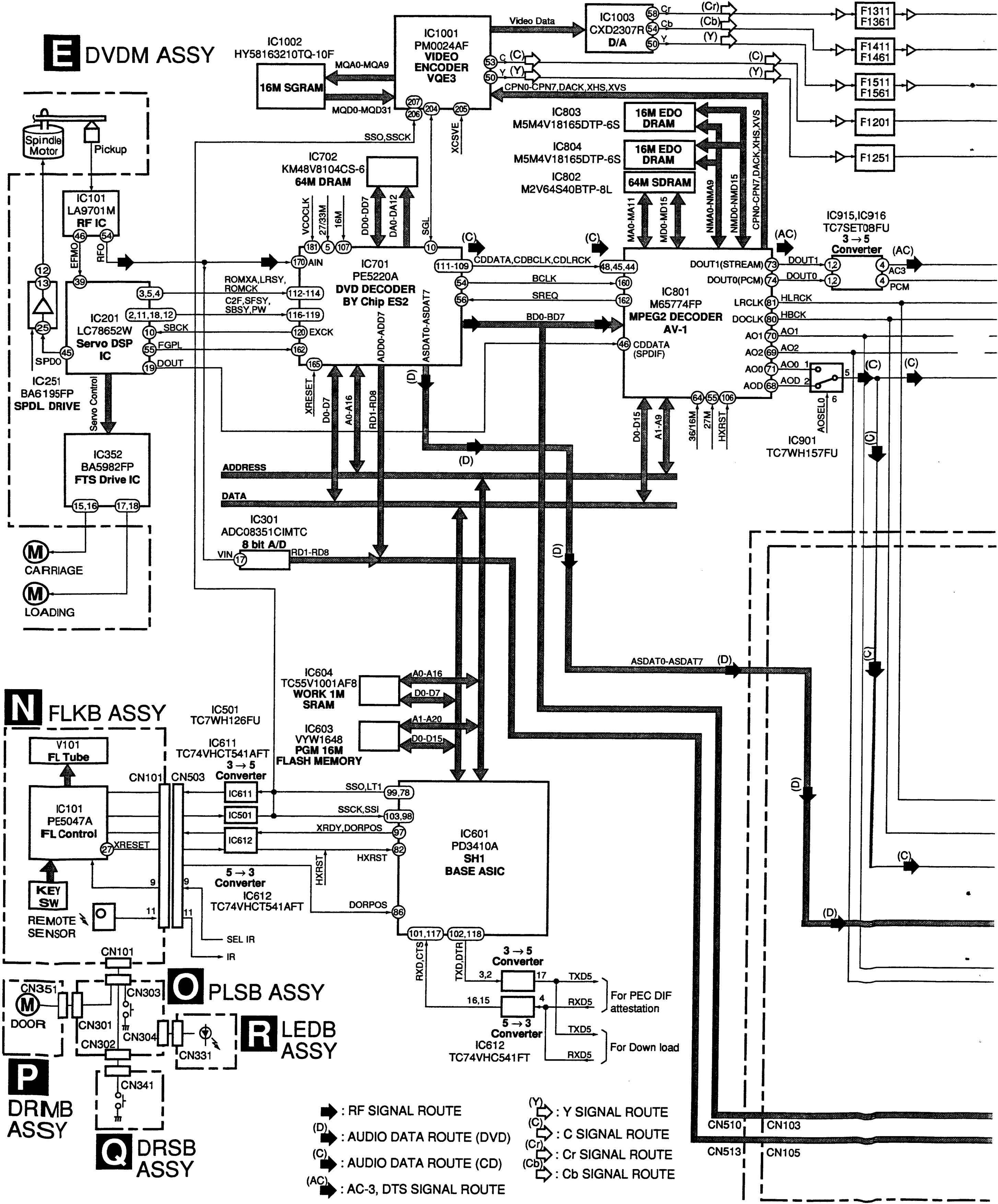


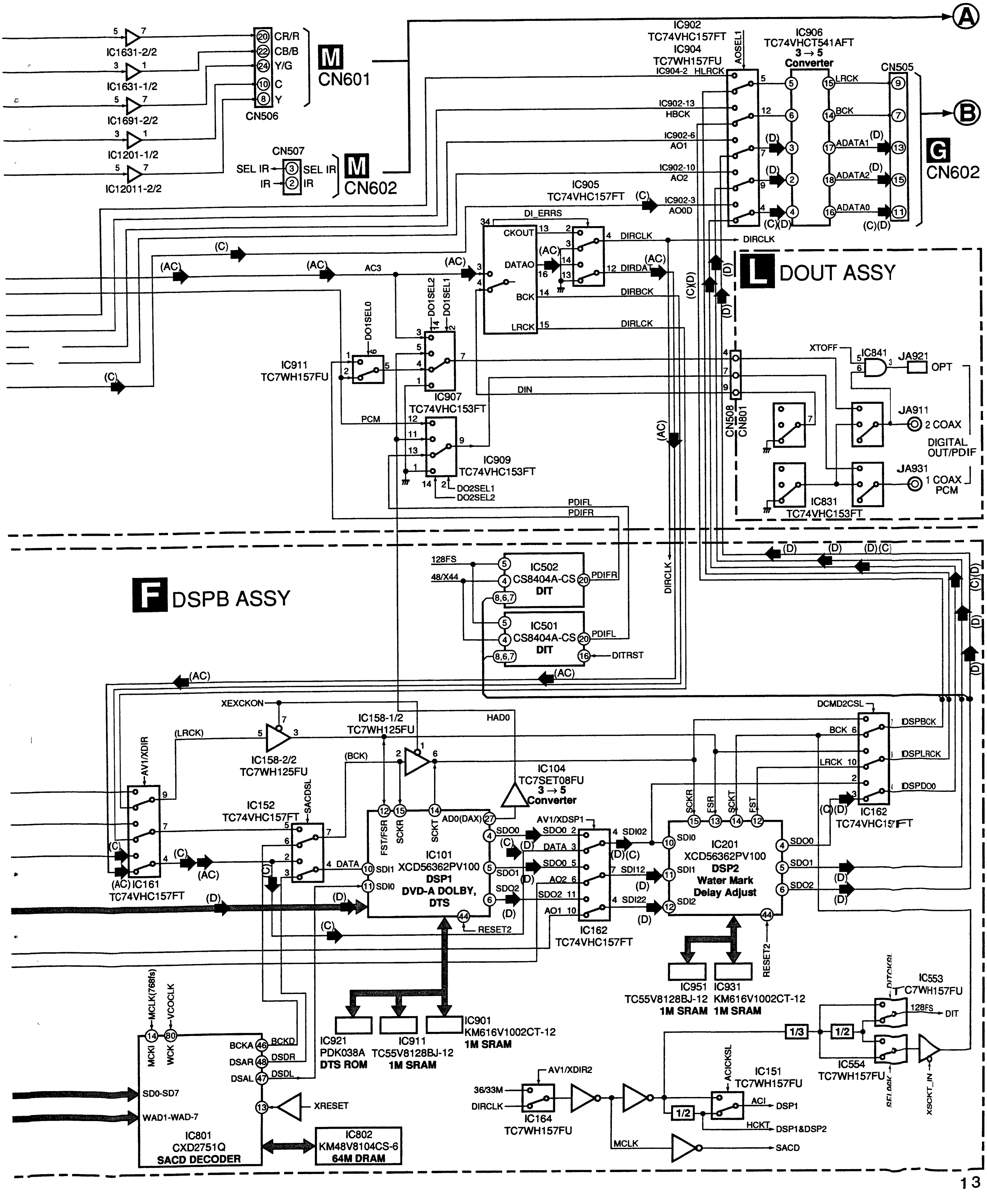
● TRAVERSE MECHANISM ASSY-S PARTS LIST

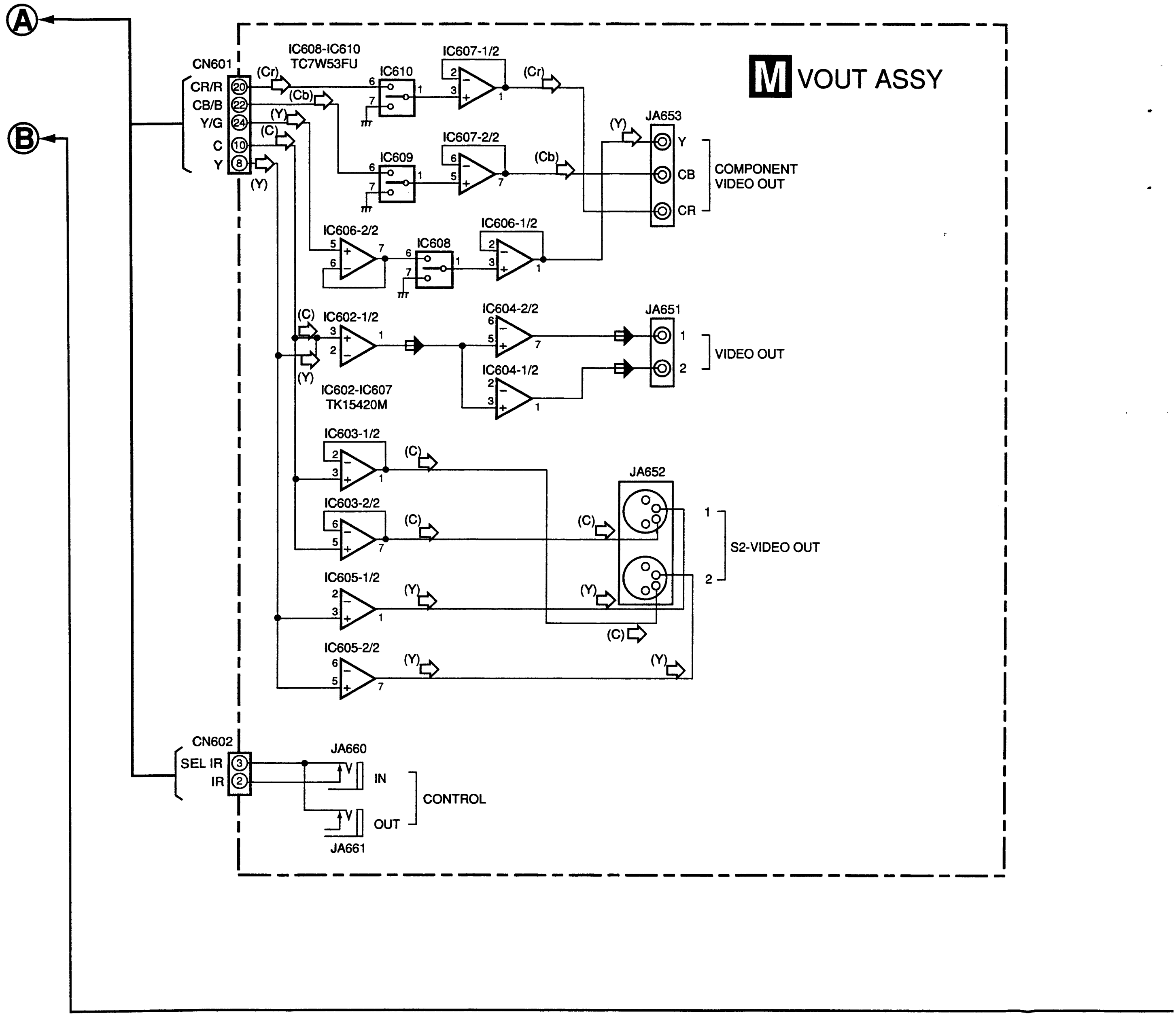
Mark	No.	Description	Part No.
NSP	1	SMEB Assy	VWG2048
NSP	2	FGSB Assy	VWG2009
NSP	3	Motor (CARRIAGE)	VXM1079
NSP	4	Motor (SPINDLE)	VXM1078
⚠ NSP	5	Pickup Assy	VWY1055
	6	Table Sheet	DEC2040
	7	Screw	VBA1058
	8	Centering Spring	VBH1278
	9	Hook Spring	VBH1317
	10	Skew Spring	VBH1303
	11	Gear Spring	VBH1308
NSP	12	Reflected Sheet	VEC1959
	13	Guide Bar	VLL1504
	14	Sub-guide Bar	VLL1505
	15	Hold Spring	VNC1017
NSP	16	Magnet Holder	VNE2070
NSP	17	Motor Base	VNE2154
NSP	18	Cover	VNE2155
	19	Centering Ring	VNL1746
NSP	20	Disc Table	VNL1747
	21	Hook	VNL1770
	22	FFC Holder	VNL1802
	23	Mechanism Base	VNL1806
	24	FG Holder	VNL1807
	25	Gear A	VNL1808
	26	Gear B	VNL1809
	27	Gear C	VNL1810
	28	Slider	VNL1811
	29	Gear D	VNL1814
NSP	30	Magnet	VYM1024
	31	Screw	JFZ17P025FZK
	32	Screw	JGZ17P028FMC
	33	Screw	VBA1051
	34	Magnet Holder Assy	VXX2507
	35	Spindle Motor Assy	VXX2649
	36	Carriage Motor Assy	VXX2650
	37	Screw	PBA1069

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

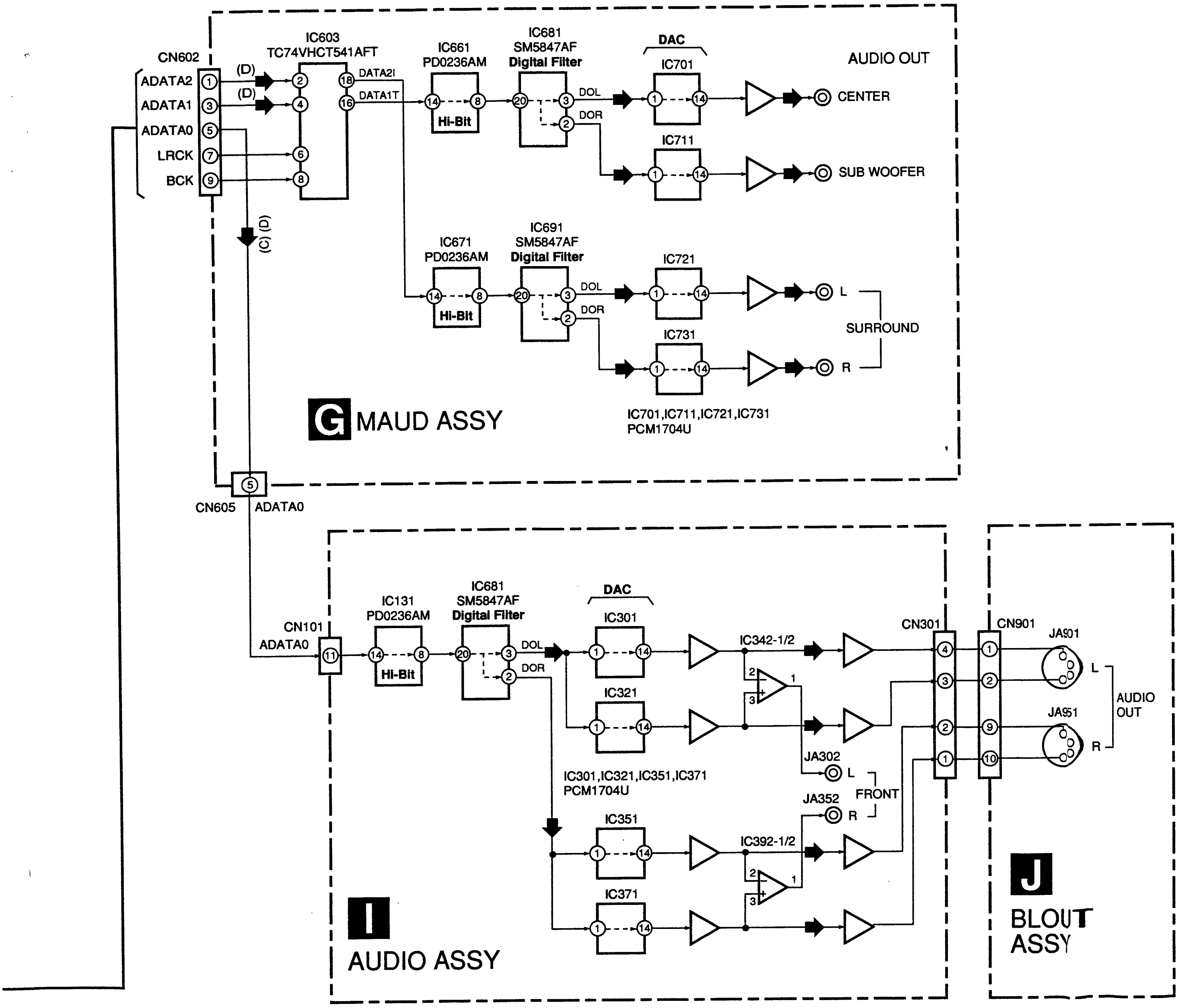
3.1 BLOCK DIAGRAM


E DVDM ASSY
Spindle Motor
Pickup
IC101 LA9701M RF IC
EFMO
RFO
IC251 BA6195FP SPDL DRIVE
SPDO
IC201 LC78652W Servo DSP IC
SBCK
FGPL
DOUT
Servo Control
IC352 BA5982FP FTS Drive IC
CARRIAGE
LOADING
IC1002 HY58163210TQ-10F
16M SGRAM
MQA0-MQA9
MQD0-MQD31
IC1001 PM0024AF VIDEO ENCODER VQE3
Video Data
IC1003 CXD2307R D/A
Cr
Cb
Y
CPN0-CPN7,DACK,XHS,XVS
SSO,SSCK
XCSVE
Video Filter
F1311 F1361
F1411 F1461
F1511 F1561
F1201
F1251
IC702 KM48V8104CS-6 64M DRAM
VCOCLK
27/33M
16M
DD0-DD7
DA0-DA12
SGL
AIN
ROMXA,LRSY, ROMCK
C2F,SFSY, SBSY,PW
EXCK
XRESET
D0-D7
A0-A16
RD1-RD8
ADD0-ADD7
ASDAT0-ASDAT7
IC701 PE5220A DVD DECODER BY Chip ES2
CDDATA,CDBCLK,CDLRCK
BCLK
SREQ
BD0-BD7
IC803 M5M4V18165DTP-6S
16M EDO DRAM
IC804 M5M4V18165DTP-6S
16M EDO DRAM
IC802 M2V64S40BTP-8L
64M SDRAM
MA0-MA11
MD0-MD15
NMA0-NMA9
NMD0-NMD15
CPN0-CPN7,DACK,XHS,XVS
IC801 M65774FP MPEG2 DECODER AV-1
CDDATA (SPDIF)
DOUT1(STREAM)
DOUT0(PCM)
LRCLK
DOCLK
AO1
AO2
AO0
AOD
DOUT1
DOUT0
HLRCK
HBCK
AO0
AOD
D0-D15
A1-A9
36/16M
27M
HXRST
IC915,IC916 TC7SET08FU 3 → 5 Converter
AC3
PCM
IC901 TC7WH157FU
AOSEL0
ADDRESS
DATA
IC301 ADC08351CIMTC 8 bit A/D
VIN
RD1-RD8
ASDAT0-ASDAT7
IC604 TC55V1001AF8 WORK 1M SRAM
A0-A16
D0-D7
IC603 VYW1648 PGM 16M FLASH MEMORY
A1-A20
D0-D15
N FLKB ASSY
V101 FL Tube
IC101 PE5047A FL Control
XRESET
KEY SW
REMOTE SENSOR
CN101
CN503
IC501 TC7WH126FU
IC611 TC74VHCT541AFT 3 → 5 Converter
IC611
IC501
IC612
5 → 3 Converter
IC612 TC74VHCT541AFT
SSO,LT1
SSCK,SSI
XRDY,DORPOS
HXRST
DORPOS
SEL IR
IR
IC601 PD3410A SH1 BASE ASIC
RXD,CTS
TXD,DTR
3 → 5 Converter
5 → 3 Converter
IC612 TC74VHC541FT
TXD5
RXD5
For PEC DIF attestation
TXD5
RXD5
For Down load
CN101
CN351
DOOR
CN303
CN301
CN302
CN304
CN331
CN341
O PLSB ASSY
R LEDB ASSY
P DRMB ASSY
Q DRSB ASSY
CN510
CN103
CN513
CN105
: RF SIGNAL ROUTE
(D) : AUDIO DATA ROUTE (DVD)
(C) : AUDIO DATA ROUTE (CD)
(AC) : AC-3, DTS SIGNAL ROUTE
(Y) : Y SIGNAL ROUTE
(C) : C SIGNAL ROUTE
(Cr) : Cr SIGNAL ROUTE
(Cb) : Cb SIGNAL ROUTE

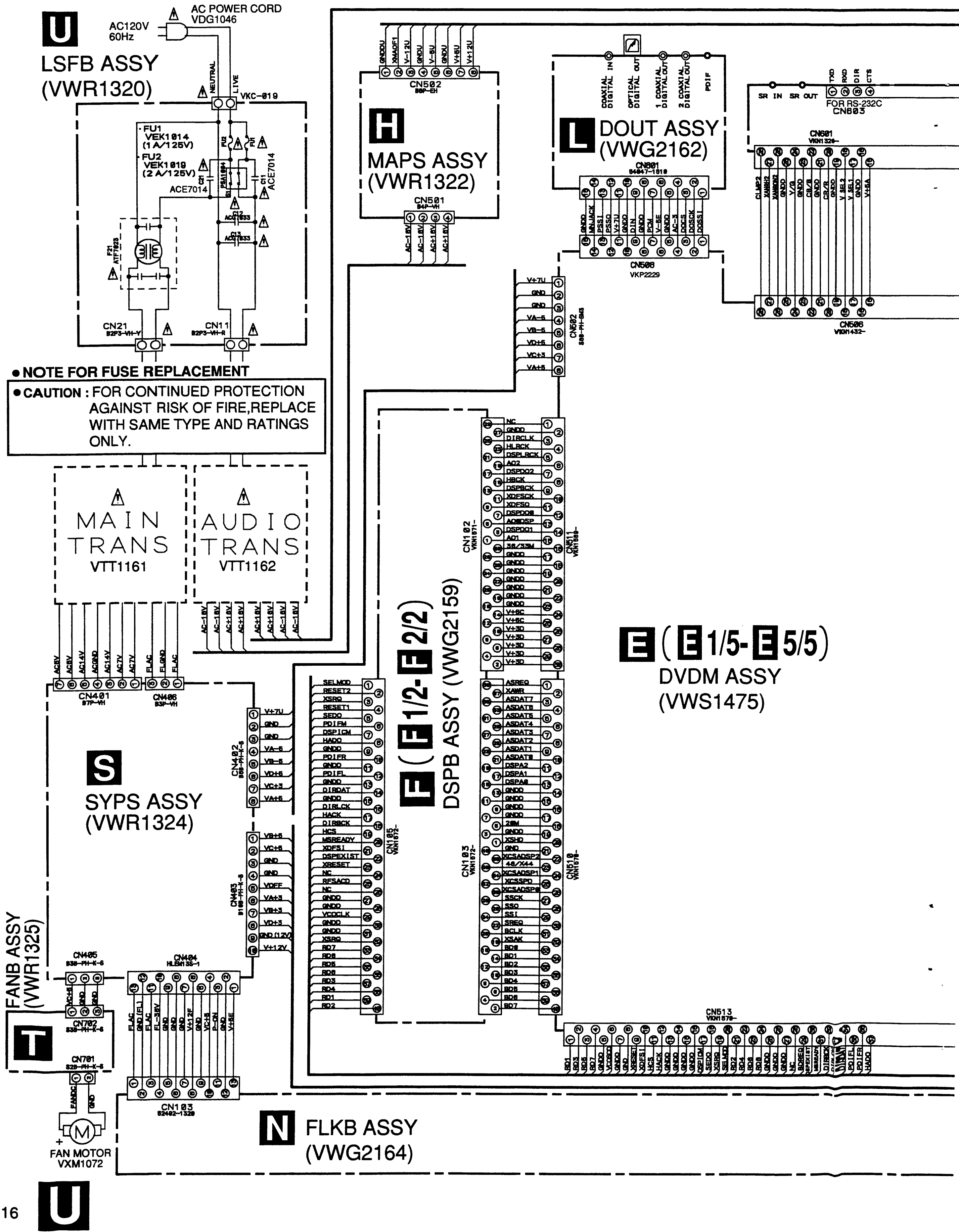

IC1631-2/2
IC1631-1/2
IC1691-2/2
IC1201-1/2
IC12011-2/2
CN506
CR/R
CB/B
Y/G
C
Y
M
CN601
CN507
SEL IR
IR
M
CN602
A
B
G
CN602
IC902
TC74VHC157FT
IC904
TC7WH157FU
IC904-2 HLRCK
IC902-13 HBCK
IC902-6 AO1
IC902-10 AO2
IC902-3 AO0D
AOSEL1
IC906
TC74VHCT541AFT
3 → 5
Converter
CN505
LRCK
BCK
ADATA1
ADATA2
ADATA0
IC905
TC74VHC157FT
DI_ERRS
CKOUT
DATAO
BCK
LRCK
DIRCLK
DIRDAT
DIRBCK
DIRLCK
AC3
DOUT ASSY
L
DO1SEL0
DO1SEL2
DO1SEL1
IC911
TC7WH157FU
IC907
TC74VHC153FT
PCM
DIN
IC909
TC74VHC153FT
DO2SEL1
DO2SEL2
PDIFL
PDIFR
XTOFF
IC841
JA921
OPT
JA911
2 COAX
DIGITAL OUT/PDIF
JA931
1 COAX
PCM
IC831
TC74VHC153FT
CN508
CN801
F
DSPB ASSY
128FS
48/X44
IC502
CS8404A-CS
DIT
IC501
CS8404A-CS
DIT
DITRST
DIRCLK
XEXCKON
(LRCK)
IC158-2/2
TC7WH125FU
IC158-1/2
TC7WH125FU
HAD0
(BCK)
IC104
TC7SET08FU
3 → 5
Converter
AV1/XDIR
IC161
TC74VHC157FT
IC152
TC74VHC157FT
SACDSL
DATA
FST/FSR
SCKR
SCKT
AD0(DAX)
SDI1
SDI0
IC101
XCD56362PV100
DSP1
DVD-A DOLBY, DTS
SDO0
SDO1
SDO2
RESET2
AV1/XDSP1
DATA
AO2
AO1
IC162
TC74VHC157FT
SDI02
SDI12
SDI22
IC201
XCD56362PV100
DSP2
Water Mark
Delay Adjust
SCKR
FSR
SCKT
FST
DCMD2CSL
BCK
LRCK
DSPBCK
DSPLRCK
DSPD00
IC162
TC74VHC157FT
IC951
TC55V8128BJ-12
1M SRAM
IC931
KM616V1002CT-12
1M SRAM
RESET2
IC921
PDK038A
DTS ROM
IC911
TC55V8128BJ-12
1M SRAM
IC901
KM616V1002CT-12
1M SRAM
IC553
TC7WH157FU
DITCKSL
128FS
DIT
IC554
TC7WH157FU
SELDSK
XSCKT_IN
1/3
1/2
MCLK(768fs)
VCOCLK
MCKI
WCK
BCKA
DSAR
DSAL
BCKD
DSDR
DSDL
SD0-SD7
WAD1-WAD-7
XRESET
IC801
CXD2751Q
SACD DECODER
IC802
KM48V8104CS-6
64M DRAM
AV1/XDIR2
36/33M
DIRCLK
IC164
TC7WH157FU
ACICKSL
IC151
TC7WH157FU
ACI
DSP1
HCKT
DSP1&DSP2
MCLK
SACD
(AC)
(C)
(D)
(C)(D)


A
B
M VOUT ASSY
CN601
CR/R 20
CB/B 22
Y/G 24
C 10
Y 8
(Cr)
(Cb)
(Y)
(C)
(Y)
IC608-IC610
TC7W53FU
IC610
IC609
IC608
IC607-1/2
IC607-2/2
IC606-2/2
IC606-1/2
(Cr)
(Cb)
(Y)
JA653
Y
CB
CR
COMPONENT
VIDEO OUT
(C)
IC602-1/2
(Y)
IC602-IC607
TK15420M
IC604-2/2
IC604-1/2
JA651
1
2
VIDEO OUT
IC603-1/2
IC603-2/2
IC605-1/2
IC605-2/2
(C)
(C)
(Y)
(Y)
JA652
(C)
(Y)
(C)
(Y)
1
2
S2-VIDEO OUT
CN602
SEL IR 3
IR 2
JA660
IN
OUT
JA661
CONTROL

(D)➡ : AUDIO DATA ROUTE (DVD)
(C)➡ : AUDIO DATA ROUTE (CD)
➡ : AUDIO SIGNAL ROUTE
⇨ : VIDEO SIGNAL ROUTE
(Y)⇨ : Y SIGNAL ROUTE
(C)⇨ : C SIGNAL ROUTE
(Cr)⇨ : Cr SIGNAL ROUTE
(Cb)⇨ : Cb SIGNAL ROUTE


CN602
ADATA2
ADATA1
ADATA0
LRCK
BCK
(D)
(D)
(C) (D)
IC603
TC74VHCT541AFT
DATA2I
DATA1T
IC661
PD0236AM
Hi-Bit
IC681
SM5847AF
Digital Filter
DOL
DOR
DAC
IC701
IC711
AUDIO OUT
CENTER
SUB WOOFER
IC671
PD0236AM
Hi-Bit
IC691
SM5847AF
Digital Filter
DOL
DOR
IC721
IC731
L
SURROUND
R
G MAUD ASSY
IC701,IC711,IC721,IC731
PCM1704U
CN605
ADATA0
CN101
ADATA0
IC131
PD0236AM
Hi-Bit
IC681
SM5847AF
Digital Filter
DOL
DOR
DAC
IC301
IC321
IC342-1/2
IC301,IC321,IC351,IC371
PCM1704U
JA302
L
FRONT
JA352
R
IC351
IC392-1/2
IC371
I
AUDIO ASSY
CN301
CN901
JA901
JA951
L
R
AUDIO OUT
J
BLOUT ASSY

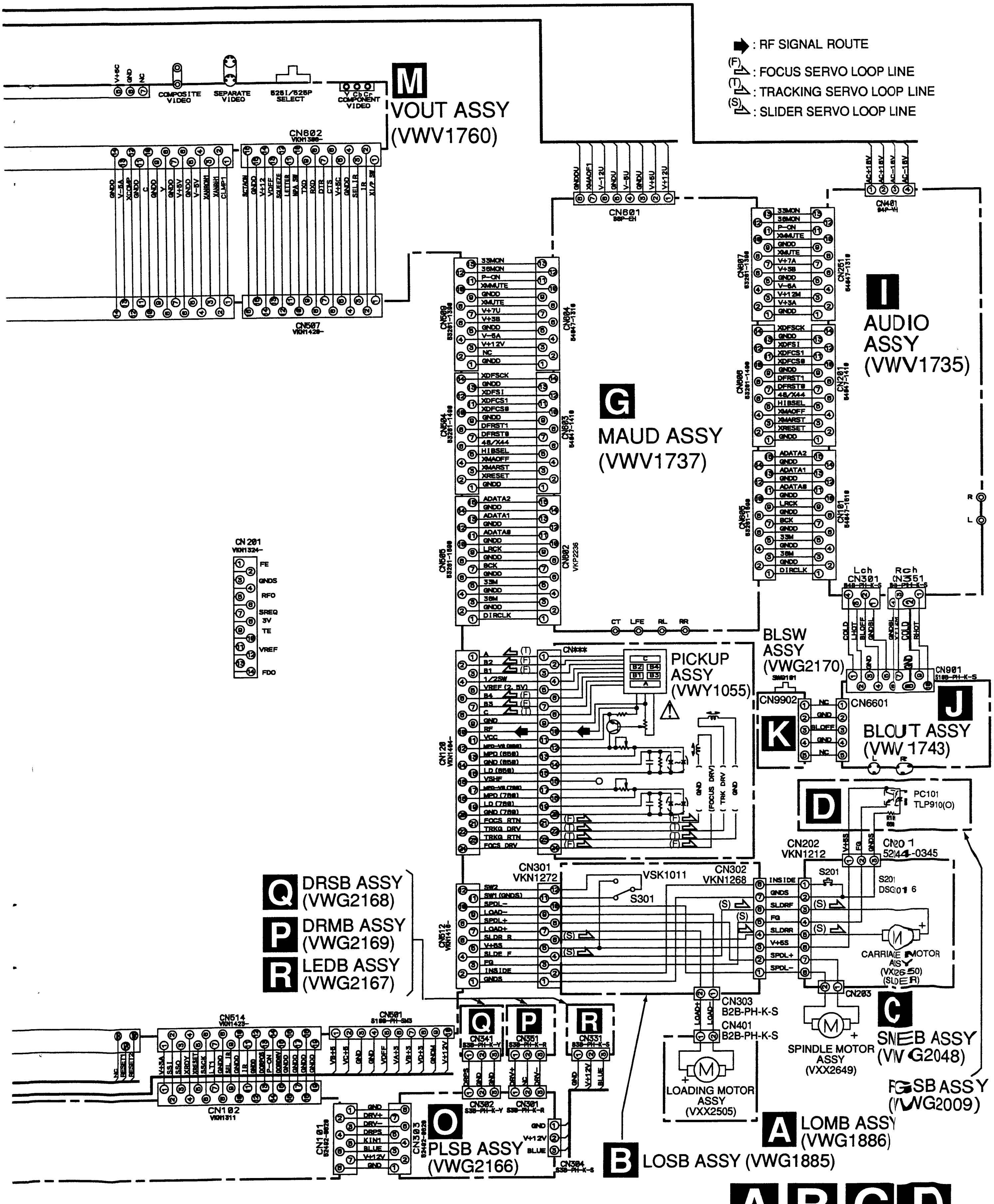
3.2 OVERALL CONNECTION DIAGRAM, LOMB, LOSB, SMEB, FGSB and LSFB ASSYS


U
LSFB ASSY
(VWR1320)
AC120V
60Hz
AC POWER CORD
VDG1046
NEUTRAL
LIVE
VKC-019
FU1
VEK1014
(1A/125V)
FU2
VEK1019
(2A/125V)
ACE7014
C11
C12
C13
F21
ATF7023
CN21
B2P3-VH-Y
CN11
B2P3-VH-R
MAIN
TRANS
VTT1161
AUDIO
TRANS
VTT1162
H
MAPS ASSY
(VWR1322)
CN502
B8P-EH
CN501
B4P-VH
L
DOUT ASSY
(VWG2162)
COAXIAL DIGITAL IN
OPTICAL DIGITAL OUT
1 COAXIAL DIGITAL OUT
2 COAXIAL DIGITAL OUT
PDIF
CN801
CN508
VKP2229
SR IN
SR OUT
FOR RS-232C
CN603
CN601
CN506
CN602
F (F 1/2- F 2/2)
DSPB ASSY (VWG2159)
CN102
CN511
CN105
CN103
CN510
E (E 1/5- E 5/5)
DVDM ASSY
(VWS1475)
CN513
S
SYPS ASSY
(VWR1324)
CN401
B7P-VH
CN406
B3P-VH
CN402
CN403
CN404
CN405
FANB ASSY
(VWR1325)
T
CN702
CN701
FAN MOTOR
VXM1072
CN103
N
FLKB ASSY
(VWG2164)

● NOTE FOR FUSE REPLACEMENT

● CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE WITH SAME TYPE AND RATINGS ONLY.

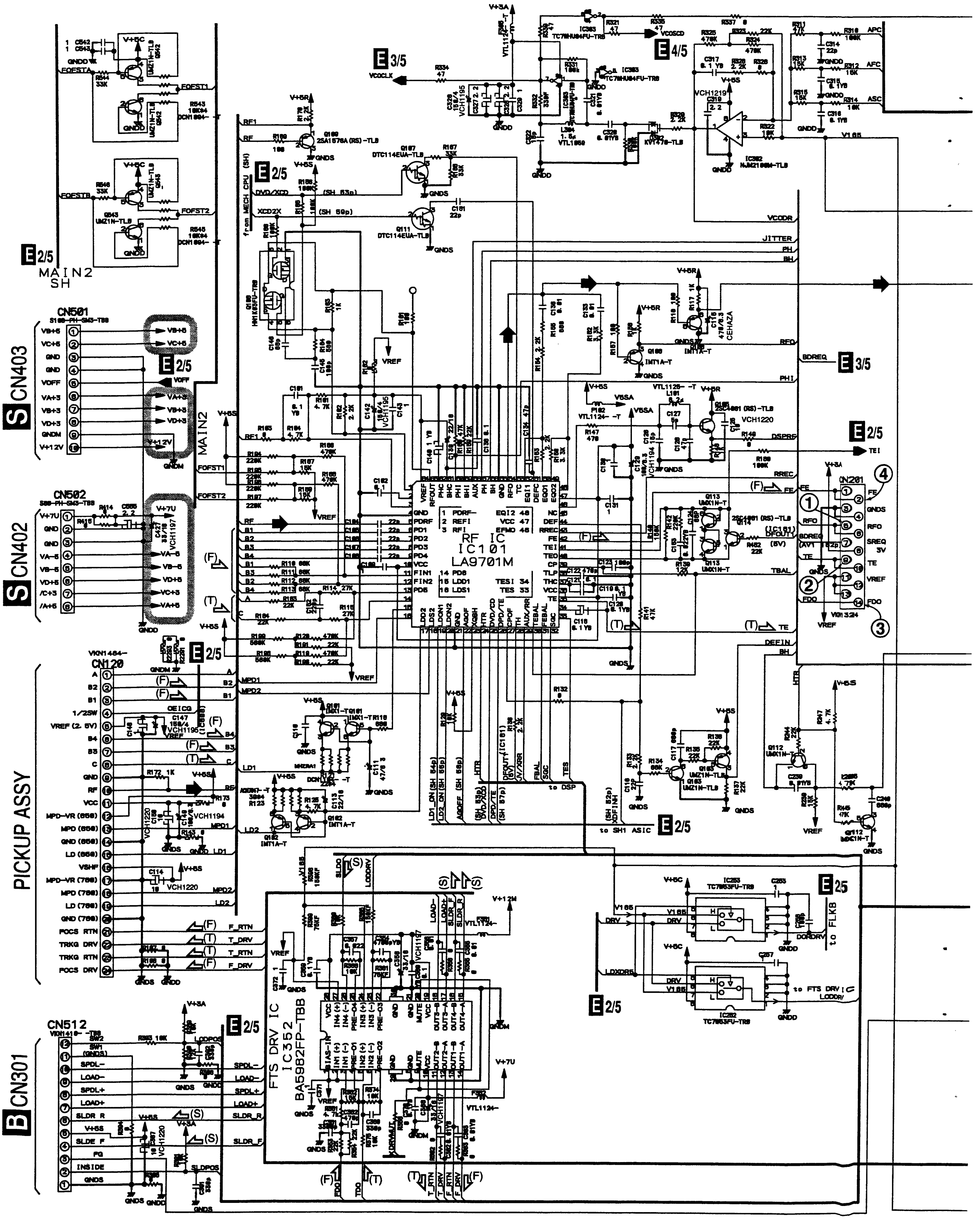
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".


: RF SIGNAL ROUTE
(F) : FOCUS SERVO LOOP LINE
(T) : TRACKING SERVO LOOP LINE
(S) : SLIDER SERVO LOOP LINE
M VOUT ASSY (VWV1760)
COMPOSITE VIDEO
SEPARATE VIDEO
525I/525P SELECT
Y Cb Cr COMPONENT VIDEO
CN602
CN507
CN601
CN401
I AUDIO ASSY (VWV1735)
G MAUD ASSY (VWV1737)
CN503
CN504
CN505
CN604
CN603
CN602 VKP2236
CN507
CN506
CN505
CN251
CN201
CN101
CN201
FE
GNDS
RFO
SREQ
3V
TE
VREF
FDO
CT LFE RL RR
R
L
Lch CN301
Rch CN351
PICKUP ASSY (VWY1055)
BLSW ASSY (VWG2170)
CN9902
CN6601
K
J BLOUT ASSY (VWV1743)
CN901
D
PC101 TLP910(O)
CN120
CN202 VKN1212
CN201 52044-0345
S201
S201 DSG01 6
CN301 VKN1272
CN302 VKN1268
VSK1011
S301
CN512
INSIDE
GNDS
SLDRF
FG
SLDRR
V+6S
SPDL+
SPDL-
CARRIAGE MOTOR ASSY (VXX2650) (SLIDER)
CN203
C SNEB ASSY (VWG2048)
SPINDLE MOTOR ASSY (VXX2649)
FGSB ASSY (VWG2009)
CN303 B2B-PH-K-S
CN401 B2B-PH-K-S
LOADING MOTOR ASSY (VXX2505)
A LOMB ASSY (VWG1886)
B LOSB ASSY (VWG1885)
Q DRSB ASSY (VWG2168)
P DRMB ASSY (VWG2169)
R LEDB ASSY (VWG2167)
CN514
CN501
CN102
CN341
CN351
CN331
CN302
CN301
CN101
CN303
CN304
O PLSB ASSY (VWG2166)

A B C D

DV-AX10

3.3 DVDM ASSY(1/5)

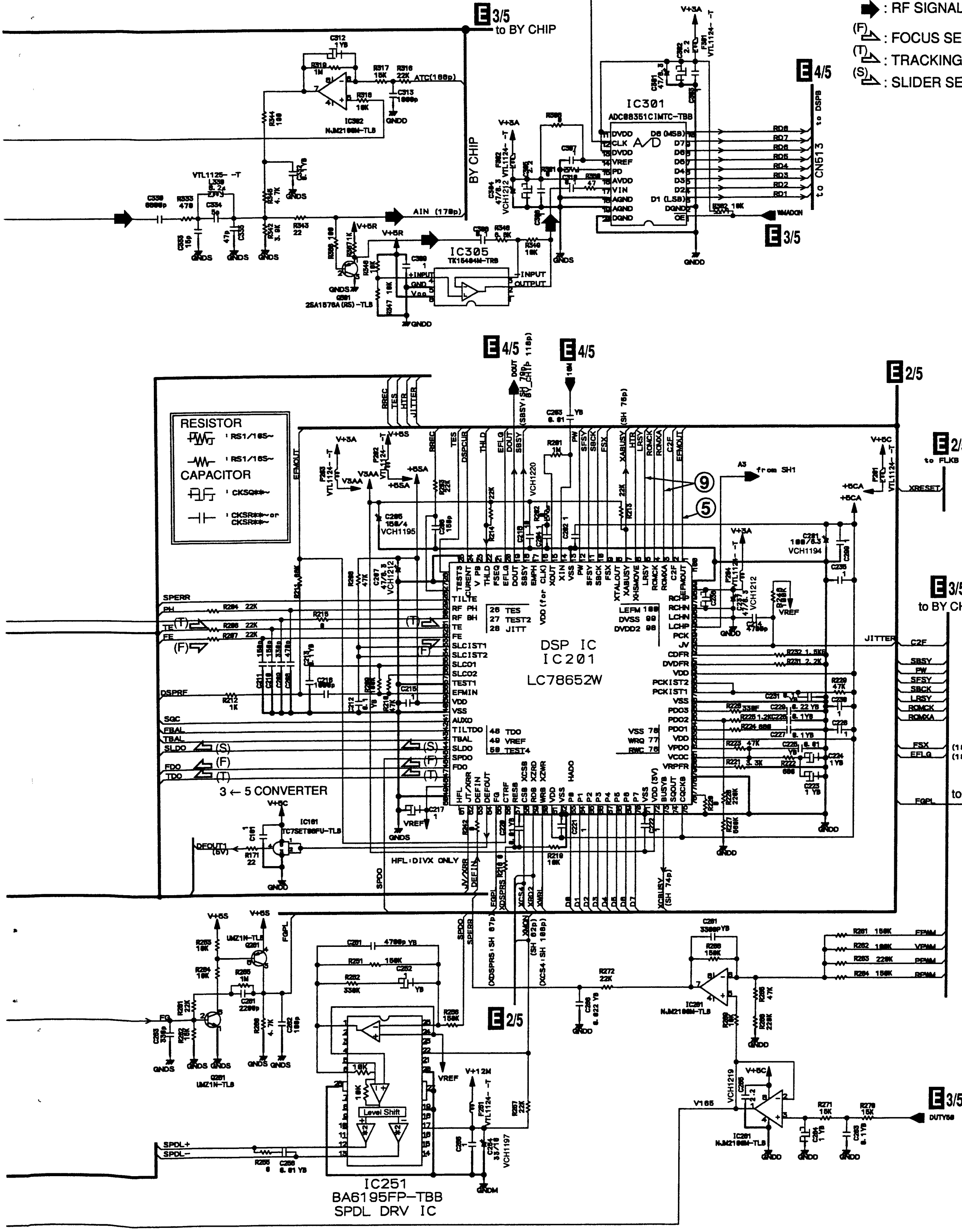

A
B
C
D
E 3/5
E 4/5
E 2/5
E 3/5
E 2/5
MAIN2
SH
CN501
S10B-PH-SM3-TB
VB+5
VC+5
GND
VOFF
VA+3
VB+3
VD+3
GNDM
V+12V
S CN403
CN502
S8B-PH-SM3-TB
V+7U
VA-5
VB-5
VD+5
/C+3
/A+5
S CN402
MAIN2
FOFST1
FOFST2
FOFSTA
FOFSTB
UMZ1N-TLB
Q542
Q543
DCN1004-T
VKN1484-
CN120
A
B2
B1
1/2SW
VREF (2.5V)
B4
B3
C
GND
RF
VCC
MPD-VR (650)
MPD (650)
GND (650)
LD (650)
VSHF
MPD-VR (780)
MPD (780)
LD (780)
GND (780)
FOCS RTN
TRKG DRV
TRKG RTN
FOCS DRV
PICKUP ASSY
OEICG
VCH1195
VCH1194
VCH1220
CN512
VKN1410-TB
SW2
SW1 (GNDS)
SPDL-
LOAD-
SPDL+
LOAD+
SLDR R
V+5S
SLDE F
FG
INSIDE
GNDS
B CN301
LODPOS
SLDPOS
RF IC
IC101
LA9701M
PDRF-
REFI
RFI
EQI2
VCC
EFMO
PDFI
LDD1
LDS1
TESI
TES
VREF
RFOUT
PHC
BHC
PHI
AUX
FIN1
FIN2
PD1
PD2
PD3
PD4
PD5
PD6
NC
DEF
RREC
FE
TEI
TEO
CP
TLP
THC
TE
LD2
LDS2
LDON1
LDON2
AGOFF
DVD/CD
DPD/TE
CPOF
TH
AUX/RR
FEBAL
TEBAL
SGC
TES
from MECH CPU (SH)
DVD/XCD
XCD2X
(SH 63p)
(SH 69p)
Q109
2SA1576A(RS)-TLB
Q107
DTC114EUA-TLB
Q111
DTC114EUA-TLB
Q108
HN1K05FU-TRB
IC303
TC7WHU04FU-TRB
VTL1124--T
VCOCLK
VCOSCD
VCH1195
VCH1219
IC302
NJM2100M-TLB
KV1470-TLB
VTL1050
APC
AFC
ASC
V165
VCODR
JITTER
PH
BH
CEHAZA
Q106
IMT1A-T
RFO
BDREQ
PHI
DSPRF
TEI
RREC
Q105
2SC4081(RS)-TLB
VCH1220
VTL1126--T
Q112
2SC4081(RS)-TLB
Q113
UMX1N-T
(IC161)
DFOUT
(5V)
TBAL
CN201
FE
GNDS
RFO
SREQ 3V
TE
VREF
FDO
VKN1324
①
②
③
④
DEFIN
HTR
Q112
UMX1N-T
Q103
UMZ1N-TLB
Q101
IMX1-T
Q102
IMT1A-T
LD1
LD2
MPD1
MPD2
LD1_ON (SH 64p)
LD2_ON (SH 65p)
AGOFF (SH 66p)
DVD/CD (SH 53p)
DPD/TE (SH 57p)
DFOUT (IC161)
AUX/RR
JV/XRR
FBAL
SGC
TES
to DSP
(SH 52p) XDFINH
to SH1 ASIC
E 2/5
FTS DRV IC
IC352
BA5982FP-TBB
VCC
IN4 (+)
IN4 (-)
PRE-O4
IN3 (+)
IN3 (-)
PRE-O3
GND
MUTE
OUT3-B
OUT3-A
OUT4-B
OUT4-A
BIAS-IN
IN1 (+)
IN1 (-)
PRE-O1
IN2 (+)
IN2 (-)
PRE-O2
OUT2-B
OUT2-A
OUT1-B
OUT1-A
F_RTN
T_DRV
T_RTN
F_DRV
SLDO
LODDRV
V+12M
V+7U
VTL1124-
FDO
TDO
T_RTN
T_DRV
F_RTN
F_DRV
(S)
(F)
(T)
IC253
TC7W53FU-TRB
IC252
TC7W53FU-TRB
V165
DRV
LDXDRS
to FLKB
to FTS DRV IC
LODDRV
E 2/5
E 2/5

E 1/5

E 1/5 DVDM ASSY (VWS1475)

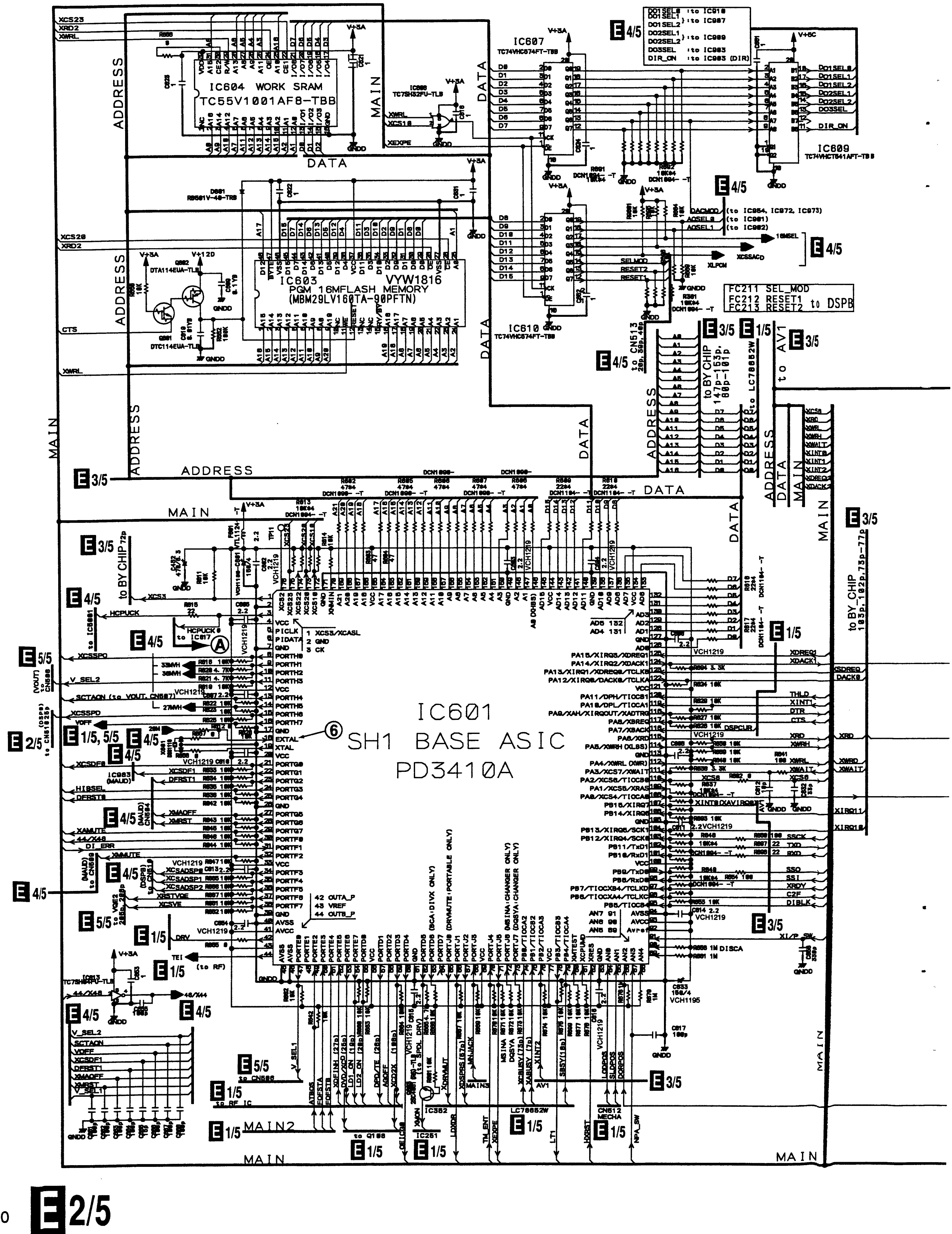
: The power supply is shown with the marked box.

➡ : RF SIGNAL ROUTE
(F) : FOCUS SERVO LOOP LINE
(T) : TRACKING SERVO LOOP LINE
(S) : SLIDER SERVO LOOP LINE

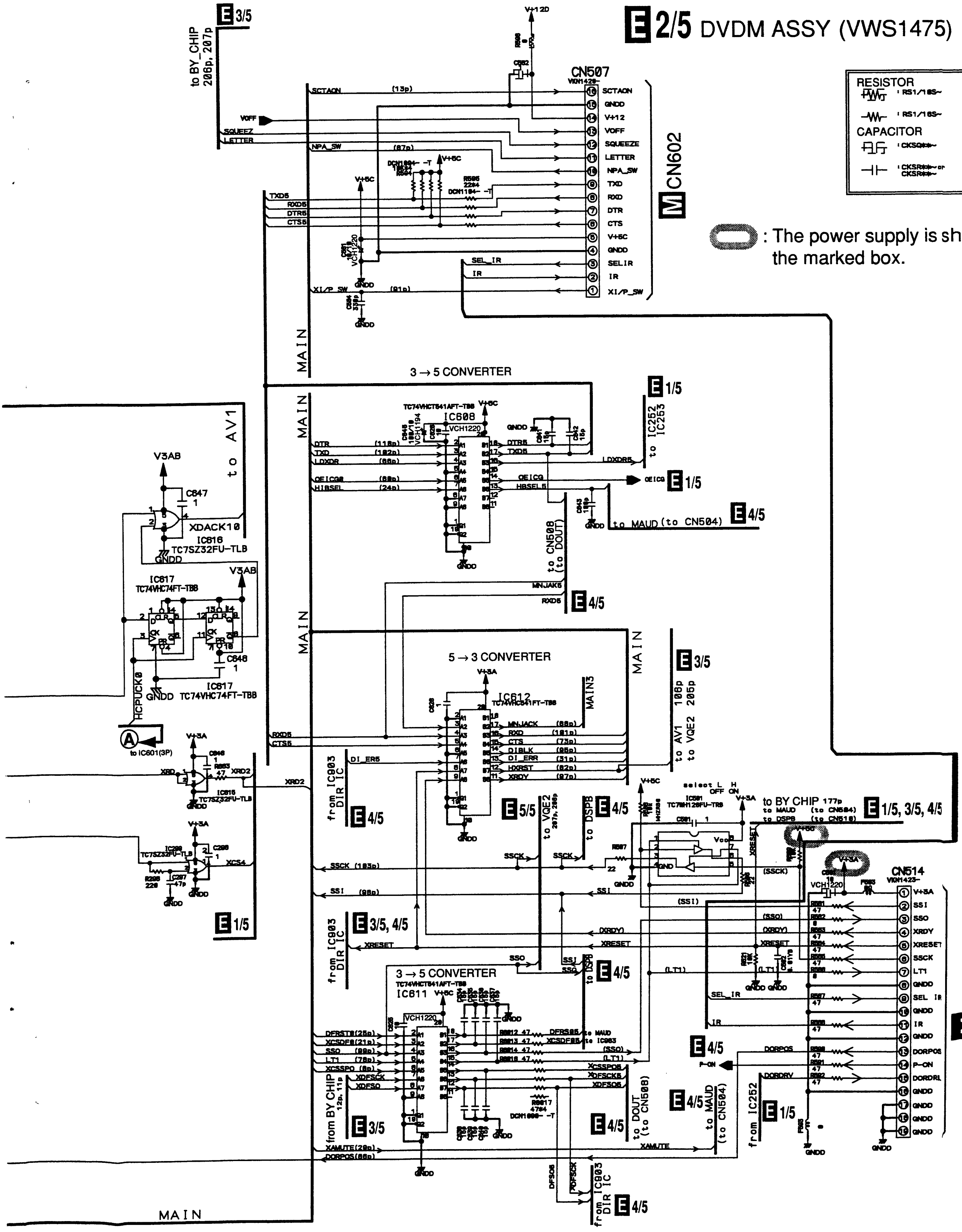

E 3/5 to BY CHIP
BY CHIP
IC302 NJM2100M-TLB
C312 1YB
R319 1M
R317 15K
R316 22K
ATC(100p)
C313 1000p
R318 10K
GNDD
R344 100
VTL1125- -T
R345 4.7K
R342 3.9K
R343 22
R333 470
AIN (170p)
GNDS
V+5R
IC305 TK15404M-TRB
+INPUT
GND
Vss
-INPUT
OUTPUT
Q301 2SA1576A(RS)-TLB
R347 10K
R349 10K
V+3A
IC301 ADC08351CIMTC-TBB
A/D
DVDD
CLK
VREF
PD
AVDD
VIN
AGND
DGND
D8 (MSB)
D7
D6
D5
D4
D3
D2
D1 (LSB)
OE
RD8
RD7
RD6
RD5
RD4
RD3
RD2
RD1
to CN513
to DSP8
E 4/5
WHADON
E 3/5
VTL1124- -T
VCH1212
E 4/5
DOUT
BY CHIP
E 4/5
E 2/5
RESISTOR
RS1/16S~
RS1/16S~
CAPACITOR
CKSQ~
CKSR~ or CKSR~
RREC
TES
HTR
JITTER
EFMOUT
V+3A
V+5S
V3AA
+5SA
+5SA
C205 150/4 VCH1195
DSPCUR
THLD
EFLG
DOUT
SBSY
VCH1220
R201 1K
FSX
XABUSY (SH 75p)
HTR
LRSY
ROMCK
ROMXA
C2F
EFMOUT
A3 from SH1
⑨
⑤
V+5C
+5CA
+5CA
E 2/5 to FLKB CN
XRESET
V+3A
C201 100/6.3 VCH1194
VCH1212
VREF
E 3/5 to BY CHIP
SPERR
PH
TE
FE
R204 22K
R206 22K
R207 22K
DSPRF
R212 1K
SGC
FBAL
TBAL
SLDO
FDO
TDO
3 ← 5 CONVERTER
V+5C
IC101 TC7SET08FU-TLB
DFOUT1 (5V)
R171 22
GNDD
TEST3
CURENT
V PB
TILTE
RF PH
RF BH
TE
FE
SLCIST1
SLCIST2
SLCO1
SLCO2
TEST1
EFMIN
VDD
VSS
AUXO
TILTDO
TBAL
SLDO
SPDO
FDO
26 TES
27 TEST2
28 JITT
48 TDO
49 VREF
50 TEST4
DSP IC
IC201
LC78652W
LEFM 100
DVSS 99
DVDD2 98
VSS 78
WRQ 77
RWC 76
RCHP
RCHN
LCHN
LCHP
PCK
JV
CDFR
DVDFR
VDD
PCKIST2
PCKIST1
VSS
PDO3
PDO2
PDO1
VDD
VPDO
VCOC
VRPFR
HFL
JT/XRR
DEFIN
DEFOUT
FG
CTRF
RES8
CS8
XCS8
XRD
WR8
XWR
VDD
VSS
P0
P1
P2
P3
P4
P5
P6
P7
VSS
VDD (3V)
BUSY8
SQOUT
CQCK8
HADO
TEST3
VDD (for CLK)
XOUT
XIN
VSS
PW
SFSY
SBCK
FSX
XTALOUT
XABUSY
XHSMOVE
LRSY
ROMCK
ROMXA
C2F
EFMOUT
JITTER
C2F
SBSY
PW
SFSY
SBCK
LRSY
ROMCK
ROMXA
FSX (191p)
EFLG (190p)
to BY CHIP (182p)
FGPL
E 3/5
HFL:DIVX ONLY
SPDO
JV/XRR
DEFIN
XDSPRS
XCS4
XRD2
XWR
D0
D1
D2
D3
D4
D5
D6
D7
XCBUSY (SH 74p)
GNDD
GNDS
V+5S
V+6S
UMZ1N-TLB
Q201
FGPL
FG
Q201 UMZ1N-TLB
GNDS
SPDO
SPERR
XDSPRS (SH 67p)
XMON (SH 52p)
XCS4 (SH 108p)
E 2/5
R272 22K
C261 3300pYB
R268 150K
IC281 NJM2100M-TLB
R261 150K
R262 100K
R263 220K
R264 150K
FPWM
VPWM
PPWM
RPWM
V+5C
VCH1219
V165
IC281 NJM2100M-TLB
R271 15K
R270 15K
E 3/5
DUTY50
IC251
BA6195FP-TBB
SPDL DRV IC
Level Shift
VREF
V+12M
VTL1124- -T
VCH1197
SPDL+
SPDL-
GNDM

DV-AX10

3.4 DVDM ASSY(2/5)


A
B
C
D
IC604 WORK SRAM
TC55V1001AF8-TBB
IC603 PGM 16MFLASH MEMORY
VYW1816
(MBM29LV160TA-90PFTN)
IC607
TC74VHC574FT-TBB
IC610
TC74VHC574FT-TBB
IC609
TC74VHCT541AFT-TBB
IC601
SH1 BASE ASIC
PD3410A
ADDRESS
DATA
MAIN
MAIN2
DO1SEL0 :to IC910
DO1SEL1 :to IC907
DO1SEL2
DO2SEL1 :to IC909
DO2SEL2
DO3SEL :to IC903
DIR_ON :to IC903 (DIR)
DACMOD (to IC954, IC972, IC973)
AOSEL0 (to IC901)
AOSEL1 (to IC902)
FC211 SEL_MOD
FC212 RESET1
FC213 RESET2 to DSPB
to CN513 28p,30p,48p
to BY CHIP 147p-153p, 80p-101p
to LC78652W
to AV1
to BY CHIP 72p
to BY CHIP 103p,102p,75p-77p
to IC581
to IC617
E 3/5
E 4/5
E 1/5
E 5/5
E 2/5
6
A

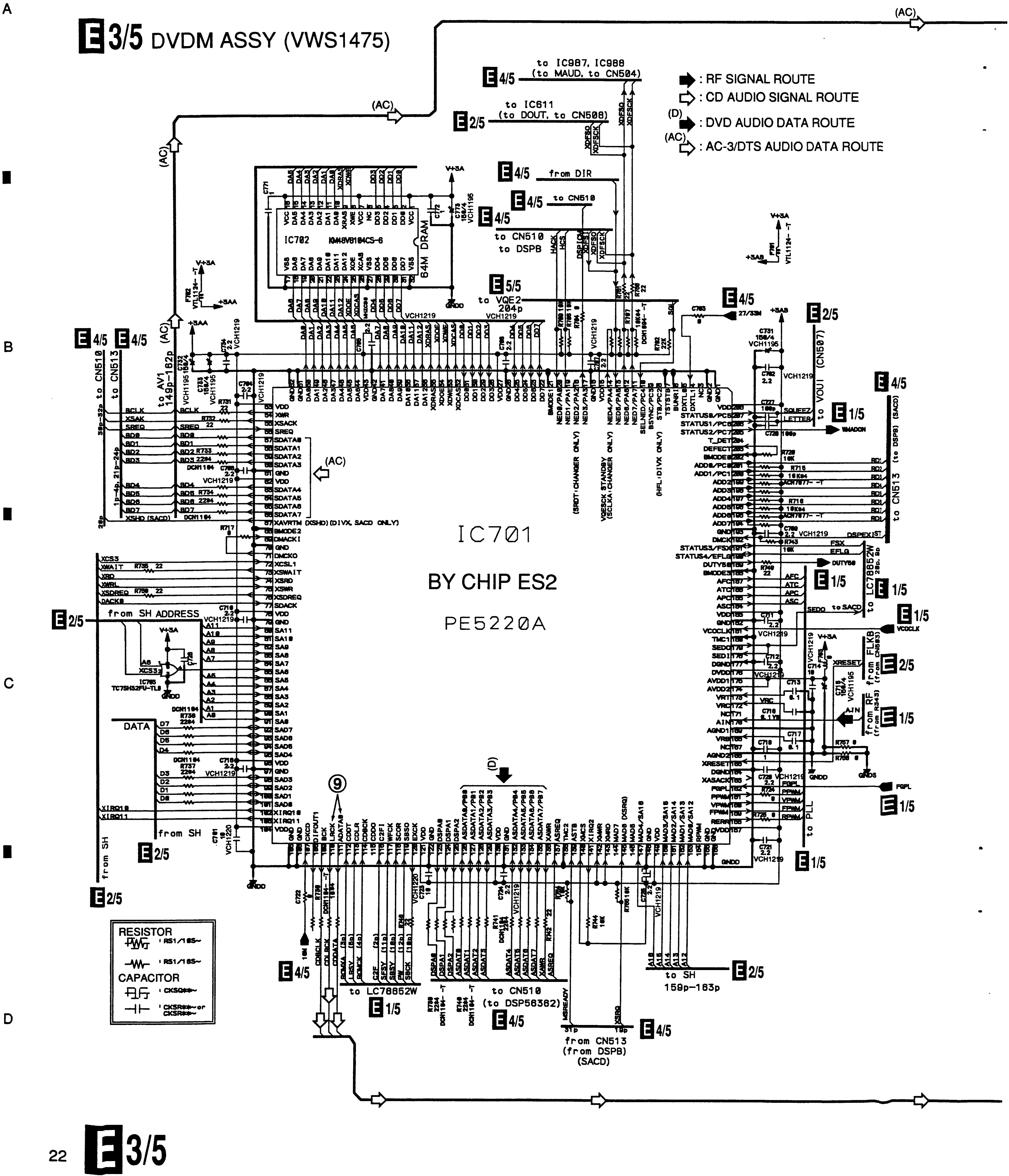
E 2/5 DVDM ASSY (VWS1475)

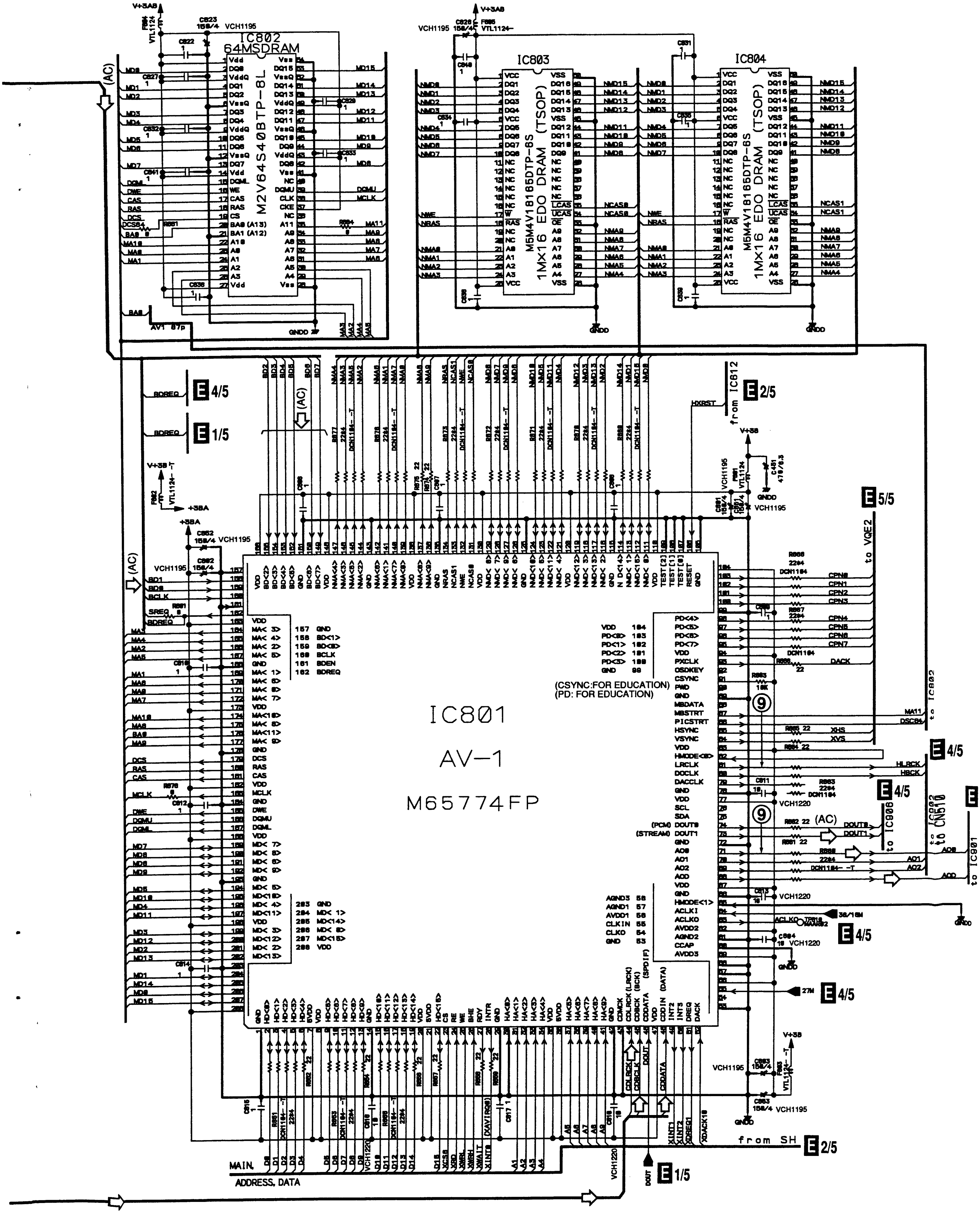

E 3/5
to BY_CHIP 206p, 207p
VOFF
SQUEEZ
LETTER
SCTAON
NPA_SW
TXD5
RXD5
DTR5
CTS5
XI/P_SW
V+12D
CN507
VKN1429-
SCTAON
GNDD
V+12
VOFF
SQUEEZE
LETTER
NPA_SW
TXD
RXD
DTR
CTS
V+5C
GNDD
SEL IR
IR
XI/P_SW
M CN602
MAIN
3 → 5 CONVERTER
TC74VHCT541AFT-TB8
IC608
VCH1220
E 1/5
to IC252 IC253
OEICG
E 1/5
to MAUD (to CN504)
E 4/5
to CN508 (to DOUT)
MNJAK5
RXD5
E 4/5
to AV1
V3AB
C647
XDACK10
IC616
TC7SZ32FU-TLB
GNDD
IC617
TC74VHC74FT-TB8
C648
HCPUCK0
A
to IC601(3P)
V+3A
XRD
XRD2
IC615
TC7SZ32FU-TLB
IC286
XCS4
E 1/5
5 → 3 CONVERTER
IC612
TC74VHC541FT-TB8
MAIN3
MNJACK
RXD
CTS
DIBLK
DI_ERR
HXRST
XRDY
MAIN
E 3/5
to AV1 106p
to VQE2 205p
from IC903 DIR IC
DI_ER5
E 4/5
E 5/5
to VQE2 207p, 206p
to DSPB
E 4/5
select L H OFF ON
IC501
TC7WH126FU-TB8
to BY CHIP 177p
to MAUD (to CN504)
to DSPB (to CN510)
E 1/5, 3/5, 4/5
SSCK (103p)
SSI (98p)
from IC903 DIR IC
E 3/5, 4/5
XRESET
XRDY
SSO
SSI
E 4/5
3 → 5 CONVERTER
TC74VHCT541AFT-TB8
IC611
VCH1220
DFRST0(25p)
XCSDF0(21p)
SSO (99p)
LT1 (78p)
XCSSPO (8p)
XDFSCK
XDFSO
DFRS05 to MAUD
XCSDF05 to IC903
XCSSPO5
XDFSCK5
XDFSO5
from BY CHIP 12p, 11p
E 3/5
E 4/5
to DOUT (to CN508)
E 4/5
to MAUD (to CN504)
from IC252
E 1/5
XAMUTE(28p)
DORPOS(86p)
XAMUTE
DFSO5
XDFSCK
from IC903 DIR IC
E 4/5
CN514
VKN1423-
V+3A
SSI
SSO
XRDY
XRESET
SSCK
LT1
GNDD
SEL IR
GNDD
IR
GNDD
DORPOS
P-ON
DORDRV
GNDD
GNDD
GNDD
GNDD
N CN102
DORPOS
DORDRV
P-ON
E 4/5
MAIN

RESISTOR
: RS1/16S~
: RS1/16S~
CAPACITOR
: CKSQ[illegible]~
: CKSR[illegible]~ or CKSR[illegible]~

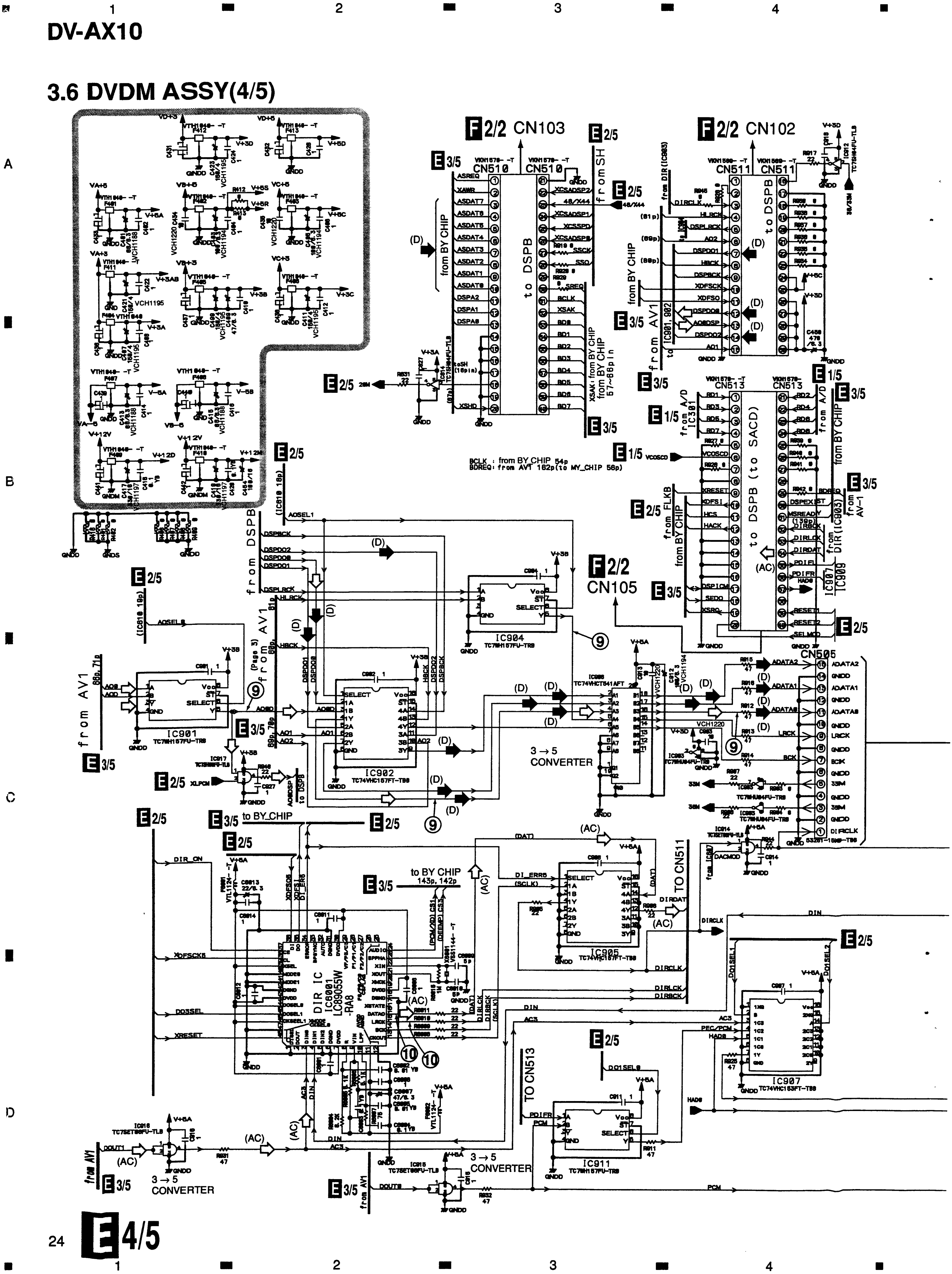
: The power supply is shown with the marked box.

3.5 DVDM ASSY(3/5)


A
B
C
D
E 3/5 DVDM ASSY (VWS1475)
: RF SIGNAL ROUTE
: CD AUDIO SIGNAL ROUTE
(D) : DVD AUDIO DATA ROUTE
(AC) : AC-3/DTS AUDIO DATA ROUTE
(AC)
E 4/5 to IC987, IC988 (to MAUD, to CN504)
E 2/5 to IC611 (to DOUT, to CN508)
XDFSO
XDFSCK
E 4/5 from DIR
E 4/5 to CN510
E 4/5 to CN510 to DSPB
HACK
HCS
E 5/5 to VQE2 204p
IC702 KM48V8104CS-6 64M DRAM
V+3A
V+3AA
+3AA
+3AB
VTL1124-T
VCH1195
VCH1219
VCH1220
E 4/5 27/33M
E 2/5 to VOUT (CN507)
E 4/5 E 4/5 to CN510 to CN513
38p-32p
1p-4p, 21p-24p
28p
to AV1 149p-162p
BCLK
XSAK
SREQ
BD0
BD1
BD2
BD3
BD4
BD5
BD6
BD7
XSHD (SACD)
DCN1104
(AC)
(XSHD) (DIVX, SACD ONLY)
XCS3
XWAIT
XRD
XWRL
XSDREQ
DACK0
E 2/5 from SH ADDRESS
IC705 TC7SH32FU-TL3
DATA
D7
D6
D5
D4
D3
D2
D1
D0
XIRQ10
XIRQ11
from SH
E 2/5
from SH
E 2/5
IC701
BY CHIP ES2
PE5220A
(SRDT: CHANGER ONLY)
VQESCK STANDBY (SCLKA: CHANGER ONLY)
(HFL: DIVX ONLY)
SQUEEZ
LETTER
E 1/5
WMADON
E 4/5 to CN513 (to DSPB) (SACD)
FSX
EFLG
DSPEXIST
DUTY50
AFC
ATC
APC
ASC
E 1/5
E 1/5 LC78652W 28p. 8p
SEDO to SACD
E 1/5 VCOCLK
E 2/5 from FLKB (from CN503)
XRESET
VRC
AIN
E 1/5 from RF (from RX43)
E 1/5 FGPL
FPWM
DPWM
VPWM
RPWM
to PLL E 1/5
⑨
(D)
RESISTOR
: RS1/16S~
: RS1/16S~
CAPACITOR
: CKSQ~
: CKSR~ or CKSR~
E 4/5
CDBCLK
CDLRCK
CDDATA
ROMXA (5p)
LRSY (5p)
BCMCK (4p)
C2F (2p)
SFSY (11p)
SBSY (11p)
CW (12p)
SBCK (10p)
to LC78652W E 1/5
DSPA0
DSPA1
ASDATA0
ASDATA1
ASDATA2
ASDATA3
ASDATA4
ASDATA5
ASDATA6
ASDATA7
XAWR
ASREQ
to CN510 (to DSP56362) E 4/5
MSREADY 31p
XSRQ 19p
from CN513 (from DSPB) (SACD) E 4/5
A16
A15
A14
A13
A12
to SH 159p-163p E 2/5


IC802
64MSDRAM
M2V64S40BTP-8L
IC803
M5M4V18165DTP-6S
1MX16 EDO DRAM (TSOP)
IC804
M5M4V18165DTP-6S
1MX16 EDO DRAM (TSOP)
IC801
AV-1
M65774FP
V+3AS
VCH1195
VTL1124
GNDD
(AC)
E 4/5
E 1/5
E 2/5
E 5/5
from IC612
to VQE2
to IC802
to CN510
to IC906
to IC901
from SH
MAIN, ADDRESS, DATA
(CSYNC:FOR EDUCATION)
(PD: FOR EDUCATION)
(PCM)
(STREAM)
BDREQ
HXRST
DOUT
27M
36/18M

3.6 DVDM ASSY(4/5)



CN103
CN510
CN102
CN511
CN513
CN105
CN505
to DSPB
from BY CHIP
from SH
from DIR (IC903)
from BY CHIP
from AV1
to DSPB (to SACD)
from A/D IC301
from A/D
from BY CHIP
from FLKB
from AV-1
from DIR(IC903)
from DSPB
from AV1
to DSPB
to BY CHIP
to BY CHIP 143p, 142p
TO CN511
TO CN513
from AV1
BCLK : from BY CHIP 54p
BDREQ: from AV1 162p(to MY_CHIP 58p)
XSAK: from BY CHIP
from BY CHIP 57~66pin
IC901
TC7WH157FU-TR8
IC902
TC74VHC157FT-TB8
IC904
TC7WH157FU-TR8
IC905
TC74VHC157FT-TB8
IC907
TC74VHC153FT-TB8
IC911
TC7WH157FU-TR8
IC906
TC74VHCT541AFT
IC6001
DIR IC
LC89055W
-RA8
IC916
TC7SET08FU-TLB
IC915
TC7SET08FU-TLB
IC917
IC914
IC912
TC7SH04FU-TLB
3 → 5
CONVERTER
VTH1048- -T
VCH1188
VCH1194
VCH1195
VCH1197
VCH1220
VKN1576- -T
VKN1569- -T
V+3D
V+5D
V+5A
V+3A
V+3B
V+3C
V+5C
V+5R
V+5S
V+3AB
V-5A
V-5B
V+12D
V+12M
VA+5
VB+5
VC+5
VA+3
VB+3
VC+3
VD+3
VD+5
VA-5
VB-5
VA+12V
VB+12V
GNDD
GNDM
GNDS
ASREQ
XAWR
ASDAT7
ASDAT6
ASDAT5
ASDAT4
ASDAT3
ASDAT2
ASDAT1
ASDAT0
DSPA2
DSPA1
DSPA0
XSHD
XCSADSP2
48/X44
XCSADSP1
XCSSPD
XCSADSP0
SSCK
SSO
SREQ
BCLK
XSAK
BD0
BD1
BD2
BD3
BD4
BD5
BD6
BD7
28M
DIRLCK
HLRCK
DSPLRCK
AO2
DSPDO1
HBCK
DSPBCK
XDFSCK
XDFSO
DSPDO0
AO0DSP
DSPDO2
AO1
VCOSCD
XRESET
XDFSI
HCS
HACK
BDREQ
DSPEXIST
MSREADY
DIRBCK
DIRDAT
PDIFI
PDIFR
HAD0
DSPICM
SEDO
XSRQ
RESET1
RESET2
SELMOD
AOSEL1
AOSEL0
AO0
AO1
AO2
XLPCM
AO0DSP
ADATA2
ADATA1
ADATA0
LRCK
BCK
33M
36M
DIRCLK
DACMOD
DIR_ON
XDFSCK5
DO3SEL
XRESET
DI_ERR5
DAT
SCLK
DIRDAT
DIN
AC3
DO1SEL1
DO1SEL2
DO1SEL0
PEC/PCM
HAD0
DOUT1
DOUTB
PCM
PDIFR
(D)
(AC)
⑨
⑩
E 2/5
E 3/5
E 1/5
F 2/2

E 4/5 DVDM ASSY (VWS1475)

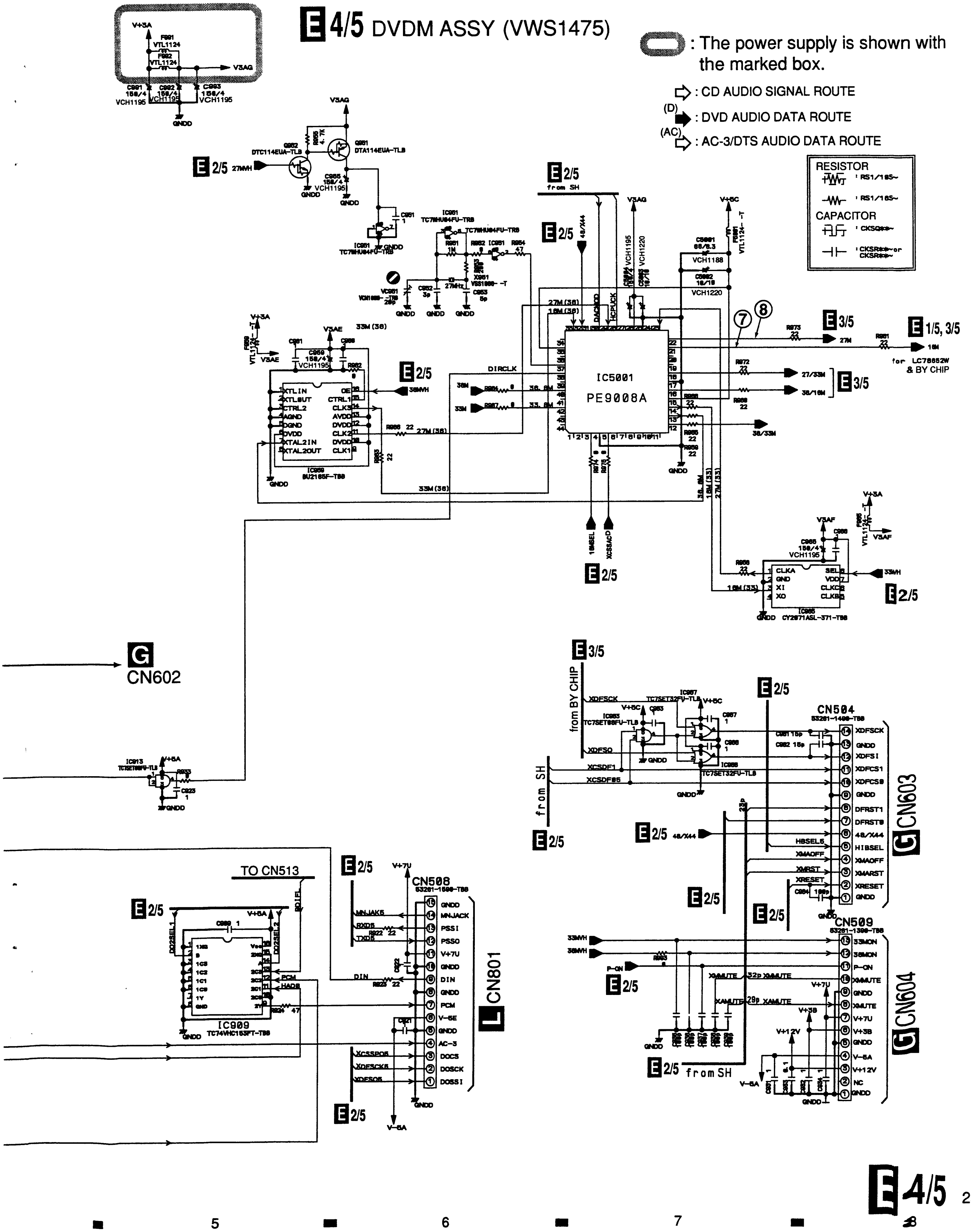
: The power supply is shown with the marked box.

⇨ : CD AUDIO SIGNAL ROUTE

(D) ➡ : DVD AUDIO DATA ROUTE

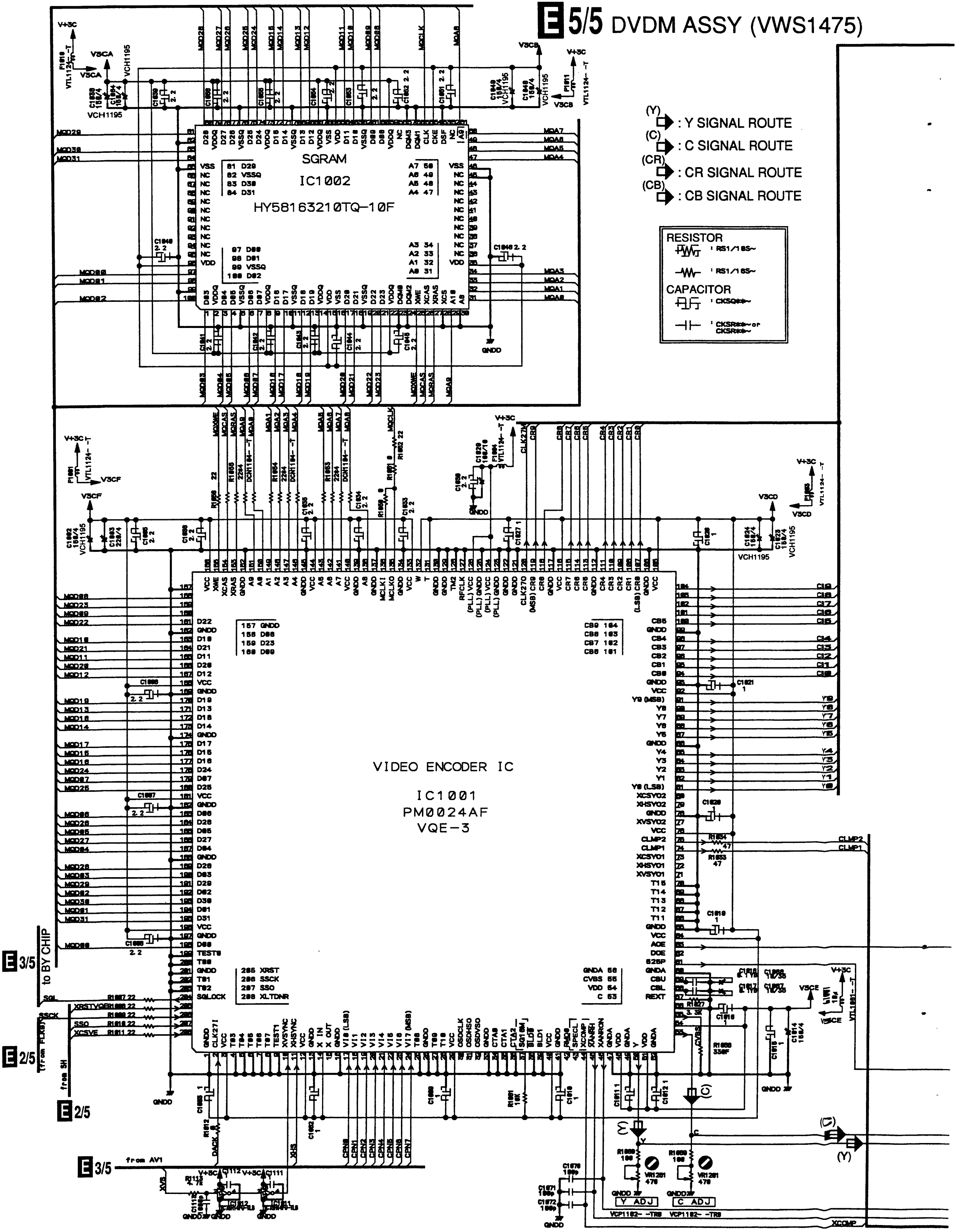
(AC) ⇨ : AC-3/DTS AUDIO DATA ROUTE

RESISTOR
: RS1/10S~
: RS1/16S~
CAPACITOR
: CKSQ***~
: CKSR***~or CKSR***~

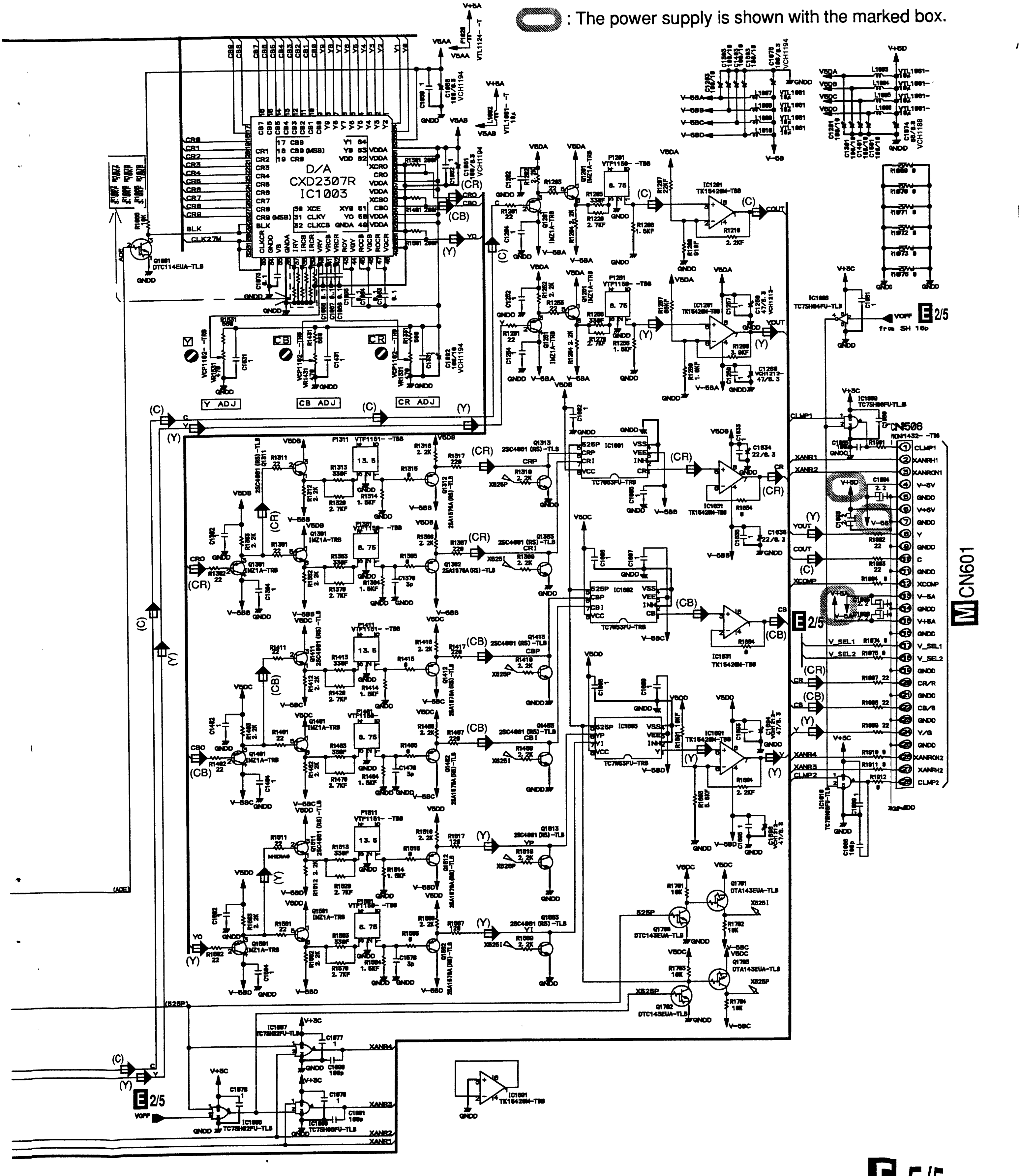

V+3A
F991 VTL1124
F992 VTL1124
V3AG
C991 150/4 VCH1195
C992 150/4 VCH1195
C993 150/4 VCH1195
GNDD
Q962 DTC114EUA-TLB
Q961 DTA114EUA-TLB
R955 4.7K
C955 150/4 VCH1195
E 2/5 27MVH
IC951 TC7WHU04FU-TRB
C951 1
R951 1M
R952 0
R953 200
R954 47
X951 VSS1000- -T 27MHz
VC951 VCH1000- -TRB 20p
C952 3p
C953 5p
E 2/5 from SH
E 2/5 48/X44
V3AG
V+5C
F5001 VTL1124- -T
C5001 68/6.3 VCH1188
C5002 10/10 VCH1220
C5004 150/4 VCH1195
C5003 10/10 VCH1220
27M(36)
16M(36)
DACMCD
HCPUCK
⑦ ⑧
E 3/5
R973 22 27M
R981 22
E 1/5, 3/5 16M for LC78652W & BY CHIP
R972 22
27/33M
36/16M
E 3/5
R968 22
R969 22
R965 22
R959 22
36/33M
IC5001 PE9008A
DIRCLK
36M R964 0 36.8M
33M R967 0 33.8M
V+3A
F950 VTL1124- -T
V3AE
33M(36)
C961
C960
C959 150/4 VCH1195
R962 0
E 2/5 36MVH
XTLIN
XTLOUT
CTRL2
AGND
DGND
DVDD
XTAL2IN
XTAL2OUT
OE
CTRL1
CLK3
AVDD
DVDD
CLK2
DVDD
CLK1
IC959 BU2165F-TBB
R966 22 27M(36)
R963 22
33M(36)
R974 0
R975 0
16MSEL
XCSSACD
E 2/5
36.8M
16M(33)
27M(33)
V+3A
V3AF
F966 VTL1124- -T
C966 150/4 VCH1195
C968
R958 22
CLKA
GND
XI
XO
SEL
VDD
CLKC
CLKB
IC966 CY2071ASL-371-TBB
16M(33)
33MVH
E 2/5
G CN602
IC913 TC7SET08FU-TLB
V+5A
R933
C923 1
GNDD
E 3/5 from BY CHIP
XDFSCK
XDFS0
IC987 TC7SET32FU-TLB
V+5C
IC983 TC7SET08FU-TLB
C983
C987 1
C988 1
IC988 TC7SET32FU-TLB
from SH
XCSDF1
XCSDF05
E 2/5
E 2/5
CN504 53261-1400-TBB
C981 15p
C982 15p
XDFSCK
GNDD
XDFSI
XDFCS1
XDFCS0
GNDD
DFRST1
DFRST0
48/X44
HBSEL
XMAOFF
XMARST
XRESET
GNDD
G CN603
E 2/5 48/X44
23p
HBSEL6
XMAOFF
XMRST
XRESET
C984 100p
E 2/5
E 2/5
CN509 53261-1300-TBB
33MVH
36MVH
R983 0
P-ON
E 2/5
XMMUTE 32p XMMUTE
XAMUTE 29p XAMUTE
33MON
36MON
P-ON
XMMUTE
GNDD
XAMUTE
V+7U
V+3B
GNDD
V-6A
V+12V
NC
GNDD
V+7U
V+3B
V+12V
V-6A
G CN604
E 2/5 from SH
TO CN513
E 2/5
V+5A
C909 1
DO2SEL1
DO2SEL2
BDIFL
IC909 TC74VHC153FT-TBB
1G
B
1C3
1C2
1C1
1C0
1Y
GND
Vcc
2G
A
2C3
2C2
2C1
2C0
2Y
PCM
HADS
R924 47
GNDD
E 2/5
V+7U
CN508 53261-1500-TBB
MNJAK5
RXD5
TXD5
R922 22
C922
DIN
R923 22
C921
XCSSPO5
XDFSCK5
XDFSO5
GNDD
MNJACK
PSSI
PSSO
V+7U
GNDD
DIN
GNDD
PCM
V-6E
GNDD
AC-3
DOCS
DOSCK
DOSSI
L CN801
E 2/5
V-6A

DV-AX10

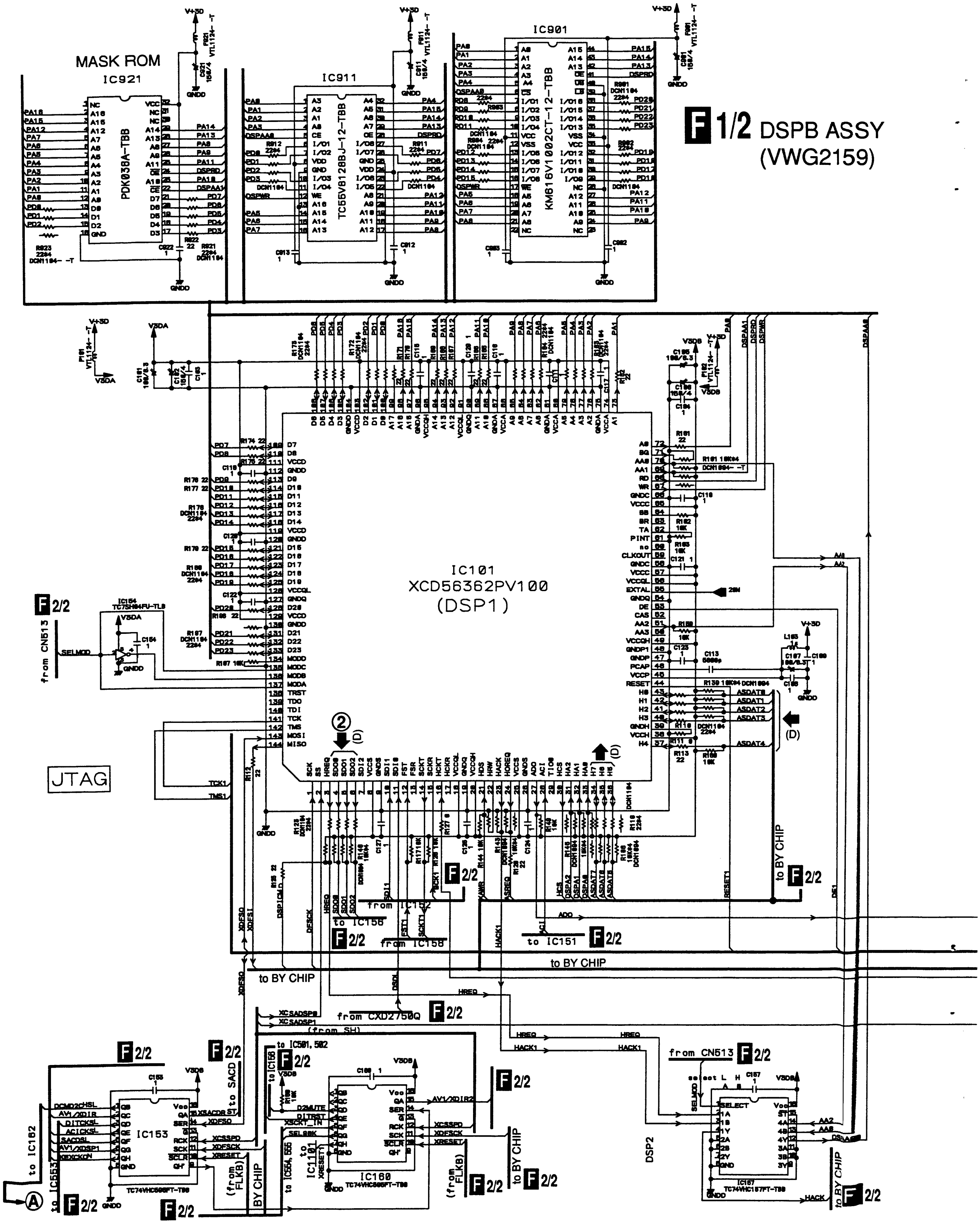
3.7 DVDM ASSY(5/5)

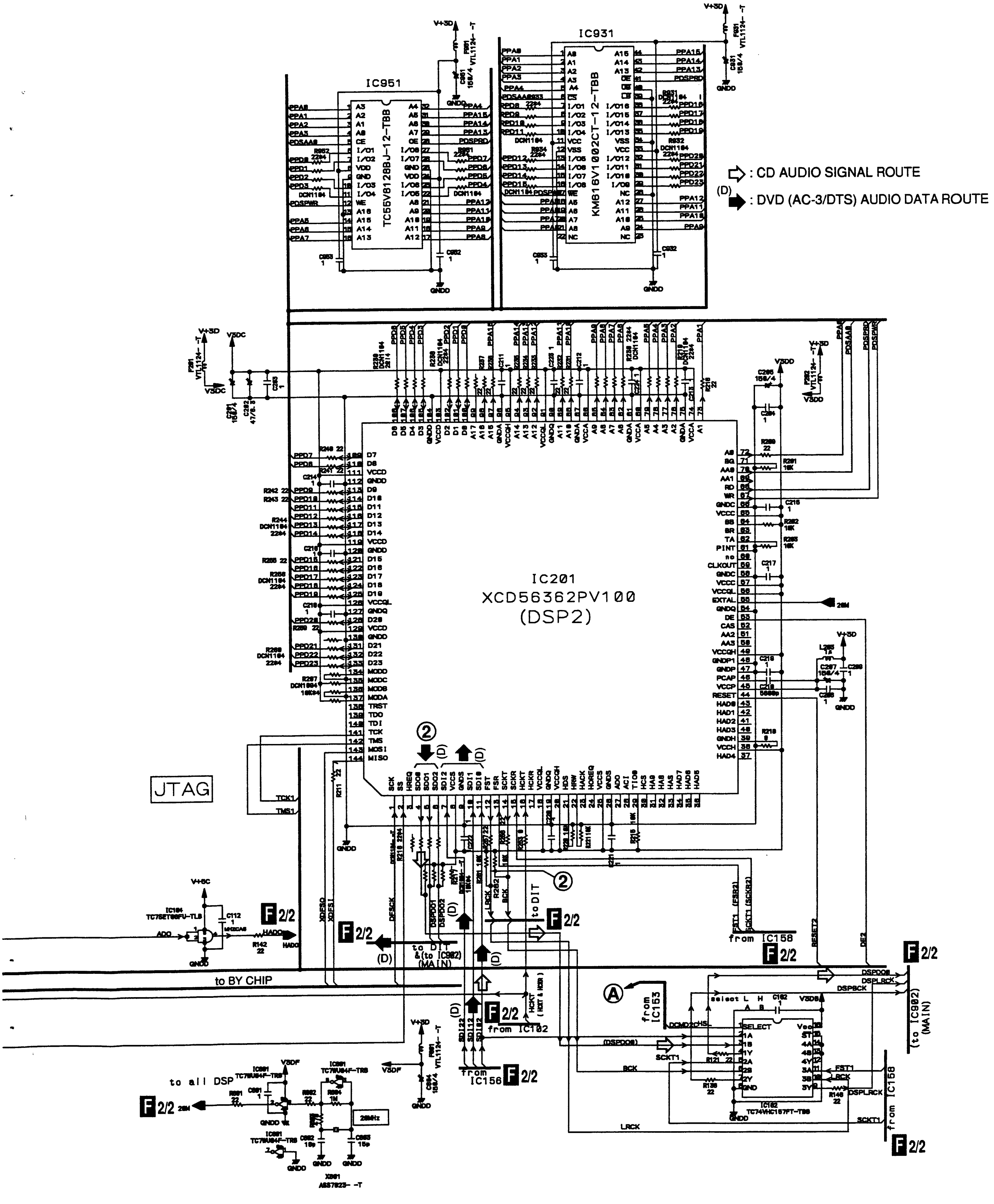

E 5/5 DVDM ASSY (VWS1475)
(Y) : Y SIGNAL ROUTE
(C) : C SIGNAL ROUTE
(CR) : CR SIGNAL ROUTE
(CB) : CB SIGNAL ROUTE
RESISTOR
: RS1/16S~
: RS1/16S~
CAPACITOR
: CKSQ~
: CKSR~ or CKSR~
SGRAM
IC1002
HY58163210TQ-10F
VIDEO ENCODER IC
IC1001
PM0024AF
VQE-3
V+3C
V3CA
V3CB
V3CF
V3CD
V3CE
VCH1195
VTL1124-T
GNDD
E 3/5 to BY CHIP
E 2/5 (from FLK0)
from SH
E 2/5
E 3/5 from AV1
CLMP2
CLMP1
XCOMP
Y ADJ
C ADJ
VR1201 470
VR1201 470
VCP1182-TR8
VCP1182-TR8
(Y)
(C)
(CR)

: The power supply is shown with the marked box.

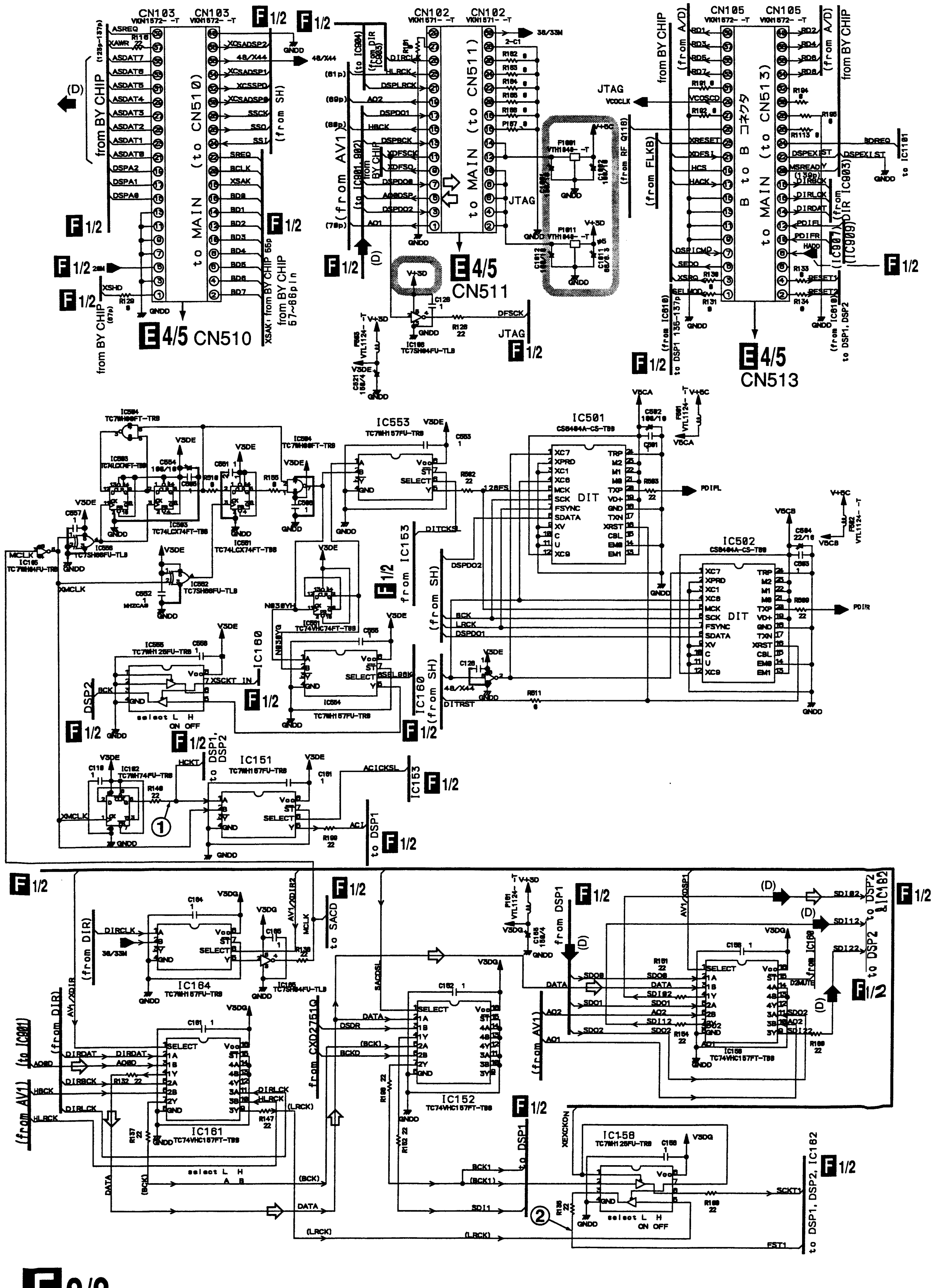

D/A
CXD2307R
IC1003
Y ADJ
CB ADJ
CR ADJ
CN506
CN601
IC1201
TK15420M-TB8
IC1601
TC7W53FU-TR8
IC1602
IC1603
IC1631
Q1601
DTC114EUA-TLB
V+5A
V5DA
V5DB
V5DC
V5DD
GNDD
V-5B
(Y)
(C)
(CB)
(CR)
YOUT
COUT
CLMP1
XANRH1
XANRON1
V-5V
V+5V
XCOMP
V-5A
V+5A
V_SEL1
V_SEL2
CR/R
CB/B
Y/G
XANRON2
XANRH2
CLMP2
VOFF
from SH 16p
E 2/5
525P
X525P
525I
X525I
XANR1
XANR2
XANR3
XANR4
(ACE)
(525P)

3.8 DSPB ASSY(1/2)


F 1/2 DSPB ASSY
(VWG2159)
MASK ROM
IC921
PDK038A-TBB
IC911
TC55V8128BJ-12-TBB
IC901
KM616V1002CT-12-TBB
IC101
XCD56362PV100
(DSP1)
JTAG
IC154
TC7SH04FU-TLB
from CN513
F 2/2
SELMOD
V+3D
V3DA
V3DB
GNDD
28M
(D)
to BY CHIP
from IC152
to IC156
from IC158
to IC151
from CXD2750Q
(from SH)
to SACD
to IC162
to IC553
IC153
TC74VHC595FT-TBB
to IC501, 502
to IC156
to IC101
IC160
TC74VHC595FT-TBB
(from FLKB)
to IC554, 555
from CN513
select L H
IC157
TC74VHC157FT-TBB
DSP2
HREQ
HACK1
AA2
AA0
DSPAA0
RESET1
DE1
A


IC951
TC55V8128BJ-12-TBB
IC931
KM616V1002CT-12-TBB
: CD AUDIO SIGNAL ROUTE
(D) : DVD (AC-3/DTS) AUDIO DATA ROUTE
IC201
XCD56362PV100
(DSP2)
JTAG
TCK1
TMS1
V+3D
V+5C
V3DC
V3DF
GNDD
IC104 TC7SET08FU-TLB
ADO
HADO
F 2/2
to BY CHIP
to DIT
to DIT &(to IC902) (MAIN)
from IC158
from IC153
from IC102
from IC156
to IC902 (MAIN)
to all DSP
28M
28MHz
IC901 TC7WU04F-TRB
X901 ASS7023- -T
IC102 TC74VHC157FT-TSB
DSPDO0
DSPLRCK
DSPBCK
SCKT1
FST1
LRCK
BCK
RESET2
DE2
HCKT (HCKT & HCKR)
SDI22
SDI12
SDI02
DSPDO1
DSPDO2
XDESO
XDESI
DFSCK
FSR2
SCKR2
select L H A B
②
Ⓐ

3.9 DSPB ASSY(2/2)

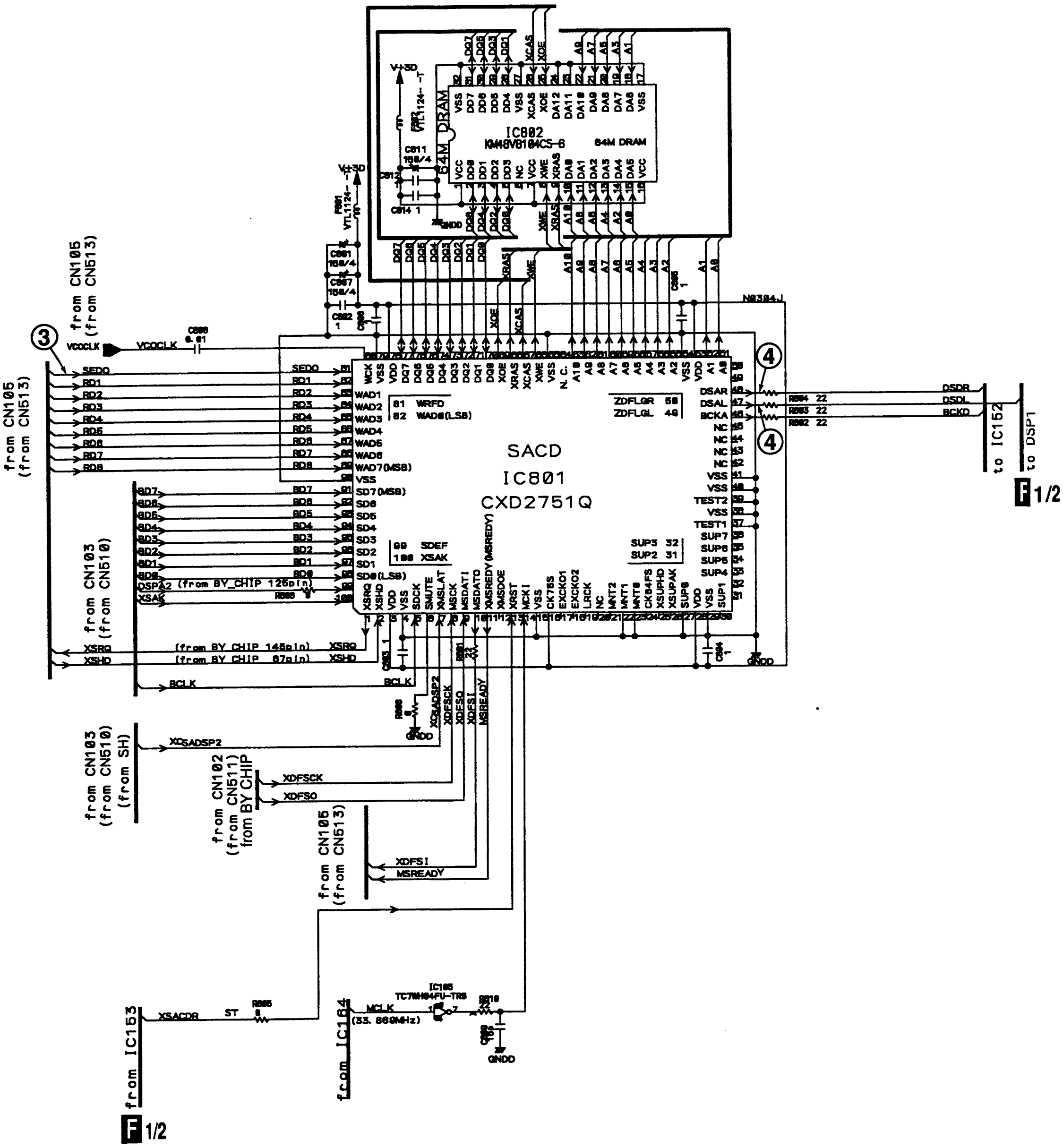

CN103
VKN1572- -T
to MAIN (to CN510)
from BY CHIP
(from SH)
E 4/5 CN510
F 1/2
CN102
VKN1571- -T
to MAIN (to CN511)
(from AV1)
(to IC801, 802)
(to DIR IC903)
E 4/5 CN511
JTAG
F1601 VTH1848- -T
F1611 VTH1848- -T
(from RF Q118)
IC166 TC7SH04FU-TLB
CN105
VKN1572- -T
B to B コネクタ
to MAIN (to CN513)
from BY CHIP (from A/D)
(from FLKB)
to IC181
E 4/5 CN513
IC553 TC7WH157FU-TRB
IC501 CS8404A-CS-TBB
DIT
PDIFL
IC502 CS8404A-CS-TBB
PDIR
IC584 TC7WH00FT-TRB
IC583 TC74LCX74FT-TRB
IC581 TC74LCX74FT-TRB
IC586 TC7SH08FU-TLB
IC582 TC7SH08FU-TLB
IC165 TC7WH04FU-TRB
IC580 TC74VHC74FT-TRB
IC554 TC7WH157FU-TRB
IC555 TC7WH125FU-TRB
(from SH) IC153
IC160 (from SH)
DSP2
to DSP1, DSP2
select L H
ON OFF
IC162 TC7WH74FU-TRB
IC151 TC7WH157FU-TRB
IC153
to DSP1
①
IC164 TC7WH157FU-TRB
IC165 TC7SH04FU-TLB
(from DIR)
to SACD
(from AV1) (to IC801)
IC161 TC74VHC157FT-TRB
from CXD2751Q
IC152 TC74VHC157FT-TRB
from DSP1
(from AV1)
IC156 TC74VHC157FT-TRB
to DSP2 & IC182
to DSP2
from IC180
IC158 TC7WH125FU-TRB
to DSP1
②
to DSP1, DSP2, IC162
SCKT1
FST1

F 2/2 DSPB ASSY (VWG2159)

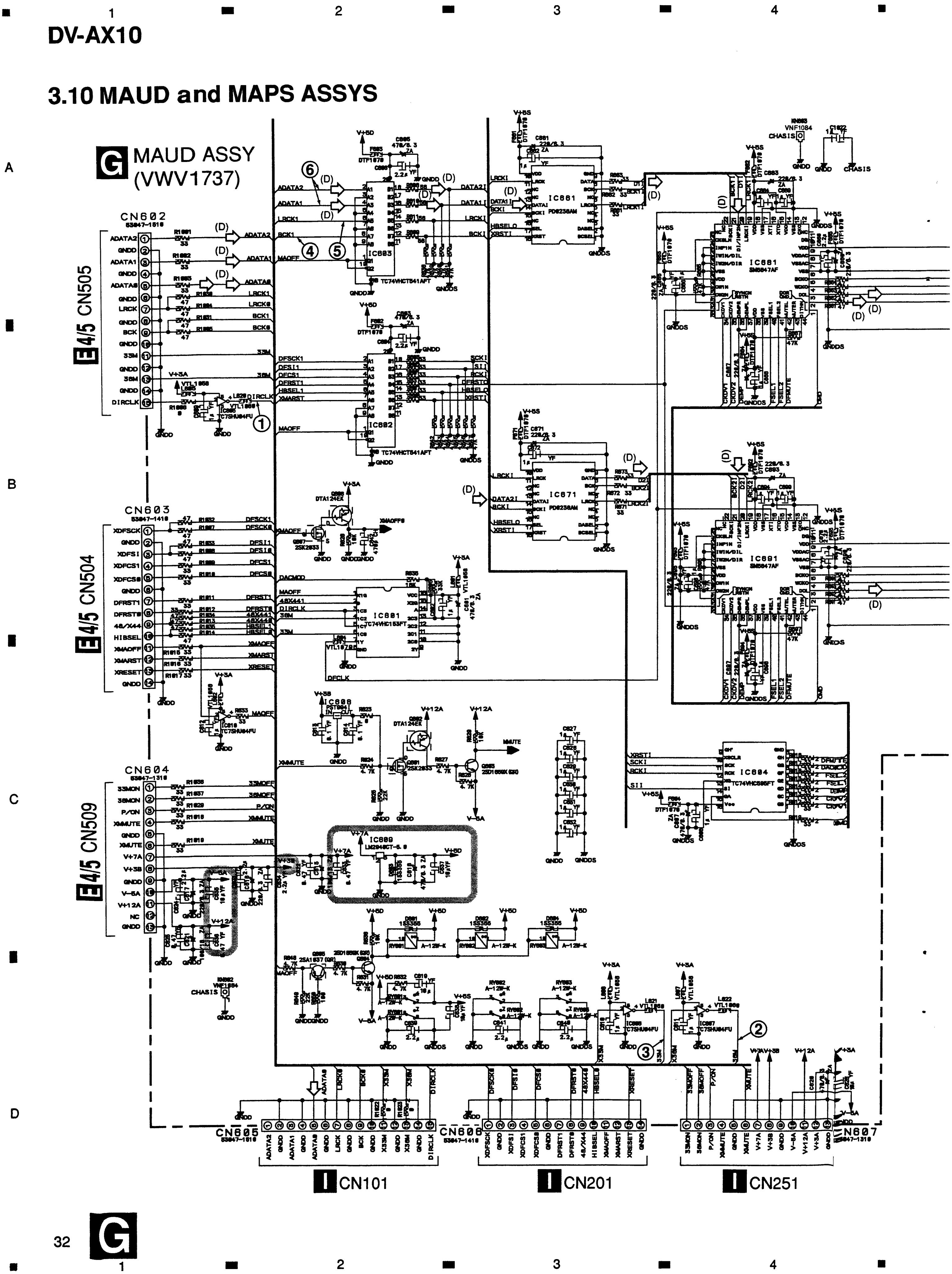
: The power supply is shown with the marked box.

⇨ : CD AUDIO SIGNAL ROUTE

(D) ➡ : DVD (AC-3/DTS) AUDIO DATA ROUTE


IC802
KM48V8104CS-6
64M DRAM
SACD
IC801
CXD2751Q
from CN105 (from CN513)
from CN103 (from CN510)
from CN103 (from CN510) (from SH)
from CN102 (from CN511) from BY CHIP
from IC153
from IC164
to IC152 to DSP1
F 1/2
VCOCLK
SEDO
RD1
RD2
RD3
RD4
RD5
RD6
RD7
RD8
BD7
BD6
BD5
BD4
BD3
BD2
BD1
BD0
DSPA2 (from BY_CHIP 125pin)
XSAK
XSRQ (from BY CHIP 145pin)
XSHD (from BY CHIP 67pin)
BCLK
XDSADSP2
XDFSCK
XDFSO
XDFSI
MSREADY
XSACDR
ST
MCLK (33.869MHz)
IC165 TC7WH04FU-TR8
DSDR
DSDL
BCKD
GNDD
V+3D
3
4

3.10 MAUD and MAPS ASSYS

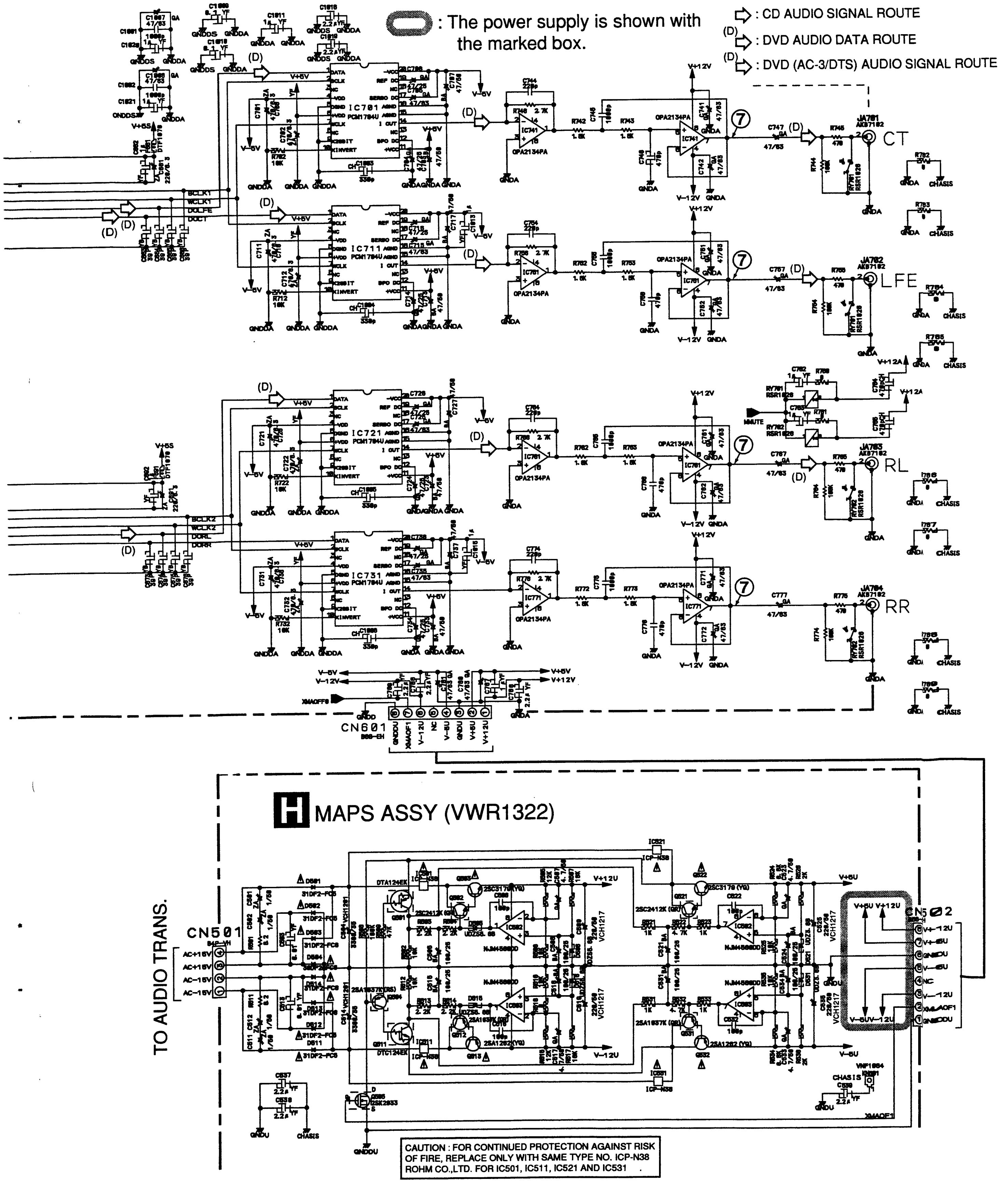

G MAUD ASSY
(VWV1737)
CN602
CN603
CN604
E 4/5 CN505
E 4/5 CN504
E 4/5 CN509
IC683
TC74VHCT541AFT
IC682
TC74VHCT541AFT
IC661
PD6236AM
IC671
PD6236AM
IC681
SM5847AF
IC691
SM5847AF
IC601
TC74VHC153FT
IC694
TC74VHC595FT
IC608
PST9041
IC609
LM2940CT-5.0
ADATA2
ADATA1
ADATA0
LRCK
BCK
33M
36M
DIRCLK
XDFSCK
XDFSI
XDFCS1
XDFCS0
DFRST1
DFRST0
48/X44
HIBSEL
XMAOFF
XMARST
XRESET
33MON
36MON
P/ON
XMMUTE
V+7A
V+3B
V-6A
V+12A
NC
GNDD
GNDDS
CHASIS
VNF1084
MMUTE
RY681
RY682
RY683
A-12W-K
CN605
CN606
CN607
I CN101
I CN201
I CN251
1
2
3
4
A
B
C
D

: The power supply is shown with the marked box.

: CD AUDIO SIGNAL ROUTE

(D) : DVD AUDIO DATA ROUTE

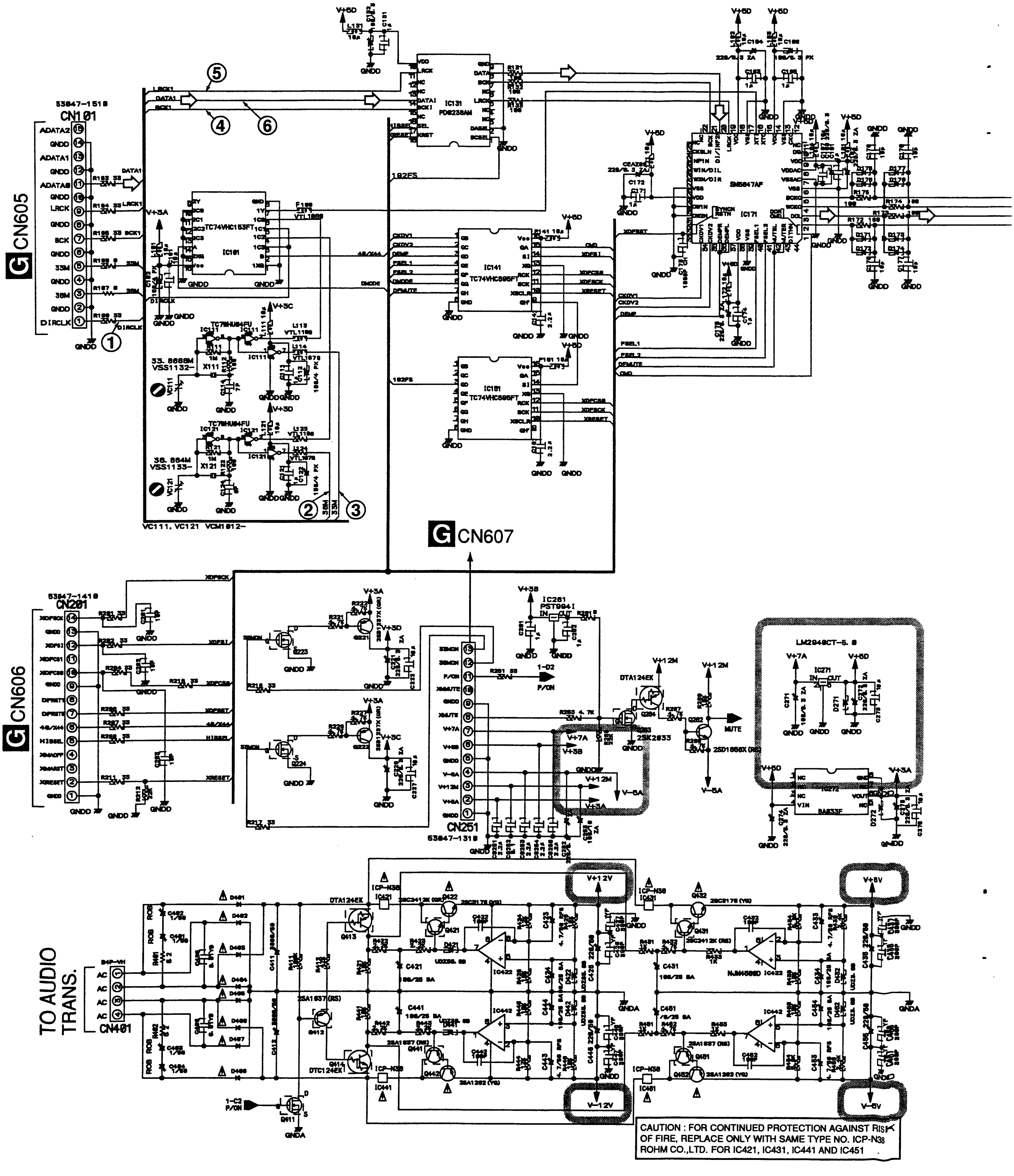
(D) : DVD (AC-3/DTS) AUDIO SIGNAL ROUTE


IC701
PCM1704U
IC711
PCM1704U
IC721
PCM1704U
IC731
PCM1704U
IC741
IC751
IC761
IC771
OPA2134PA
DATA
BCLK
WCLK
NC
SERBO
DGND
AGND
I OUT
BPO
2COBIT
XINVERT
BCLK1
WCLK1
DOLFE
DOCT
BCLK2
WCLK2
DORL
DORR
V+5V
V-5V
V+12V
V-12V
V+5S
GNDA
GNDDA
GNDDS
CHASIS
XMUTE
XMAOFF8
JA701
AKB7162
CT
JA702
AKB7162
LFE
JA703
AKB7162
RL
JA704
AKB7162
RR
RY701
RSR1626
RY702
RSR1626
V+12A
CN601
B8B-EH
GNDDU
XMAOF1
V-12U
NC
V-5U
GNDDU
V+5U
V+12U
H
MAPS ASSY (VWR1322)
TO AUDIO TRANS.
CN501
B4P-VH
AC+15V
AC+15V
AC-15V
AC-15V
31DF2-FC5
D501
D502
D503
D504
D511
D512
D513
D514
IC501
IC511
IC521
IC531
ICP-N38
DTA124EK
DTC124EK
2SC2412K
2SC5171
2SA1937K
2SA1282
2SC3179
2SA1037K
NJM4558DD
IC502
IC503
IC522
IC532
VCH1217
UDZ5.6B
Q505
2SK2833
V+12U
V-12U
V+5U
V-5U
VNF1084
CHASIS
XMAOF1
CN502
V+5U V+12U
V-5U V-12U
V+12U
V+5U
GNDDU
V-5U
NC
V-12U
XMAOF1
GNDDU

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. ICP-N38 ROHM CO.,LTD. FOR IC501, IC511, IC521 AND IC531 .

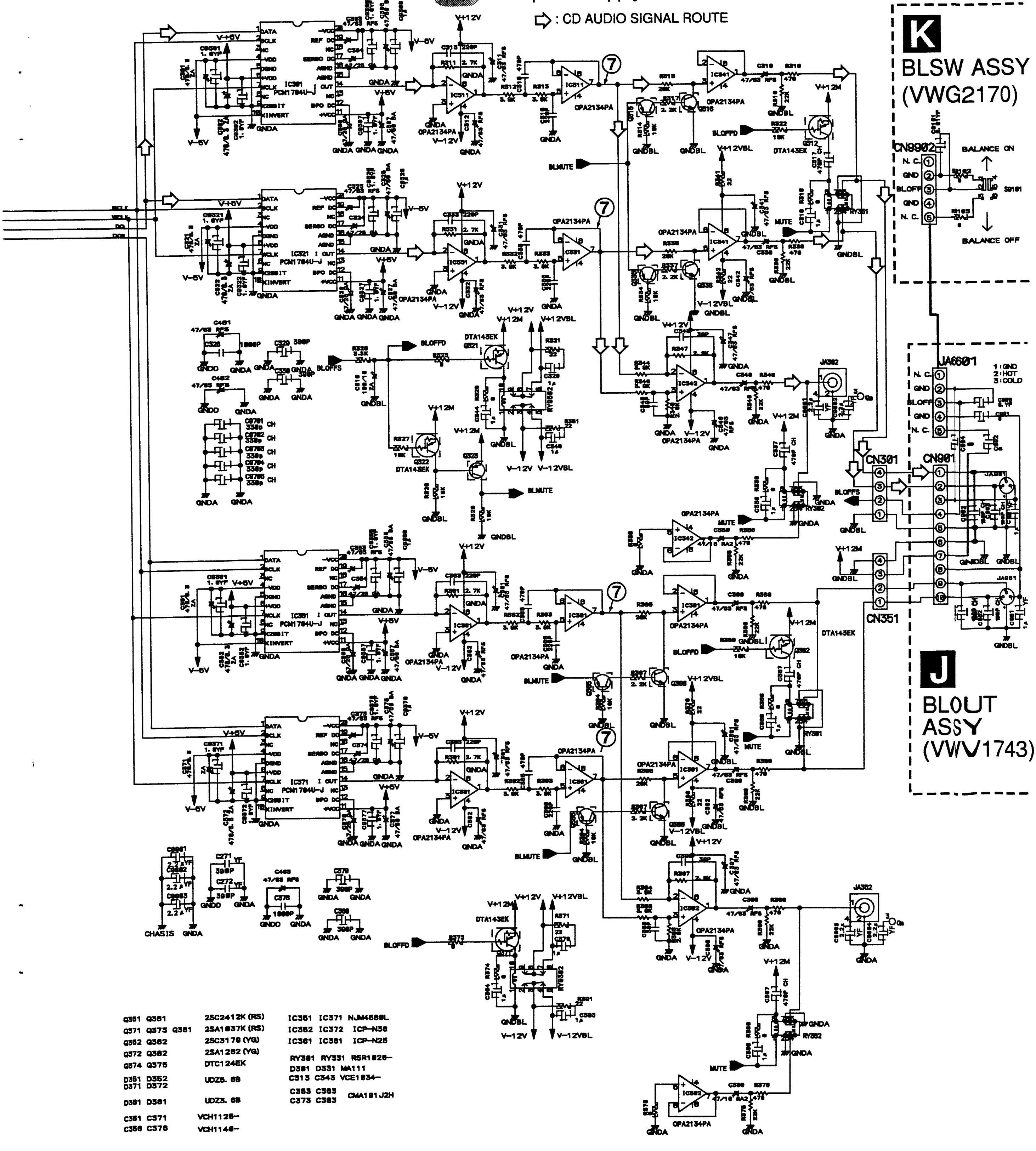
3.11 AUDIO, BLOUT and BLSW ASSYS

I AUDIO ASSY (VWV1735)


G CN605
53847-1510
CN101
ADATA2
GNDD
ADATA1
ADATA0
LRCK
BCK
33M
36M
DIRCLK
IC131
PD0238AM
IC101
TC74VHC153FT
IC171
SM5847AF
IC141
TC74VHC595FT
IC151
TC74VHC595FT
TC7WHU04FU
33.8688M
VSS1132-
X111
36.864M
VSS1133-
X121
VC111, VC121 VCM1012-
G CN607
G CN606
53847-1410
CN201
CN251
53847-1310
IC261
PST994I
LM2940CT-5.0
IC271
IC272
BA033F
DTA124EK
2SK2033
2SD1858X
MUTE
1-D2
P/ON
TO AUDIO TRANS.
CN401
AC
ICP-N38
IC421
IC431
IC441
IC451
IC422
IC442
NJM4580D
2SC2412K
2SC2178
2SA1037
2SA1282
DTC124EK
1-C2
P/ON
V+12V
V-12V
V+6V
V-6V
V+5D
V+3A
V+3C
V+3D
V+7A
V+38
V-5A
V+12M
GNDD
GNDA
①
②
③
④
⑤
⑥

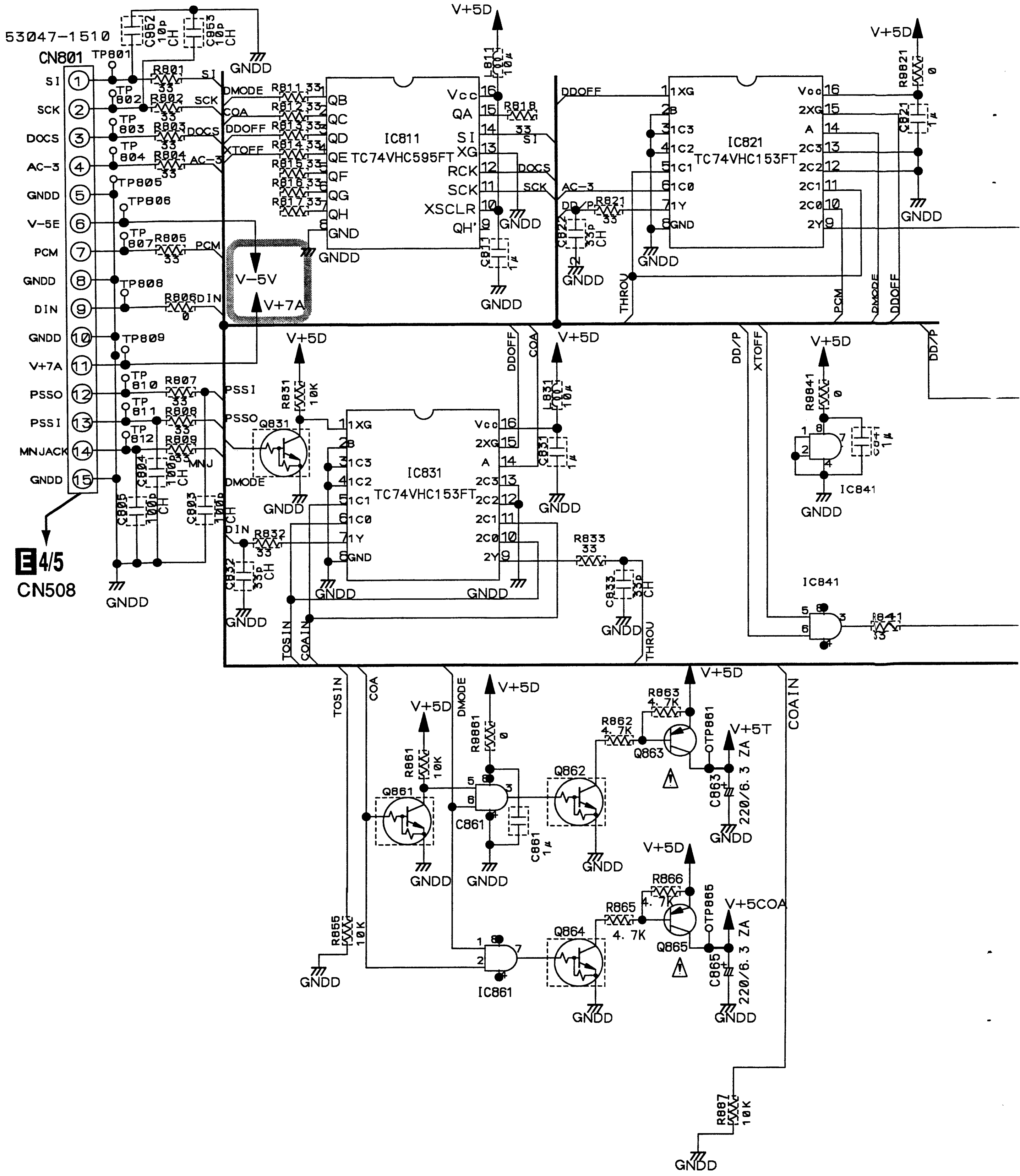
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. ICP-N38 ROHM CO.,LTD. FOR IC421, IC431, IC441 AND IC451 .

: The power supply is shown with the marked box.


: CD AUDIO SIGNAL ROUTE
K
BLSW ASSY
(VWG2170)
J
BLOUT
ASSY
(VWV1743)
CN9902
CN301
CN901
CN351
JA6601
BALANCE ON
BALANCE OFF
BLOFFD
BLOFFS
BLMUTE
MUTE
OPA2134PA
PCM1704U-J
DTA143EK
V+12V
V-12V
V+5V
V-5V
GNDA
GNDBL
CHASIS

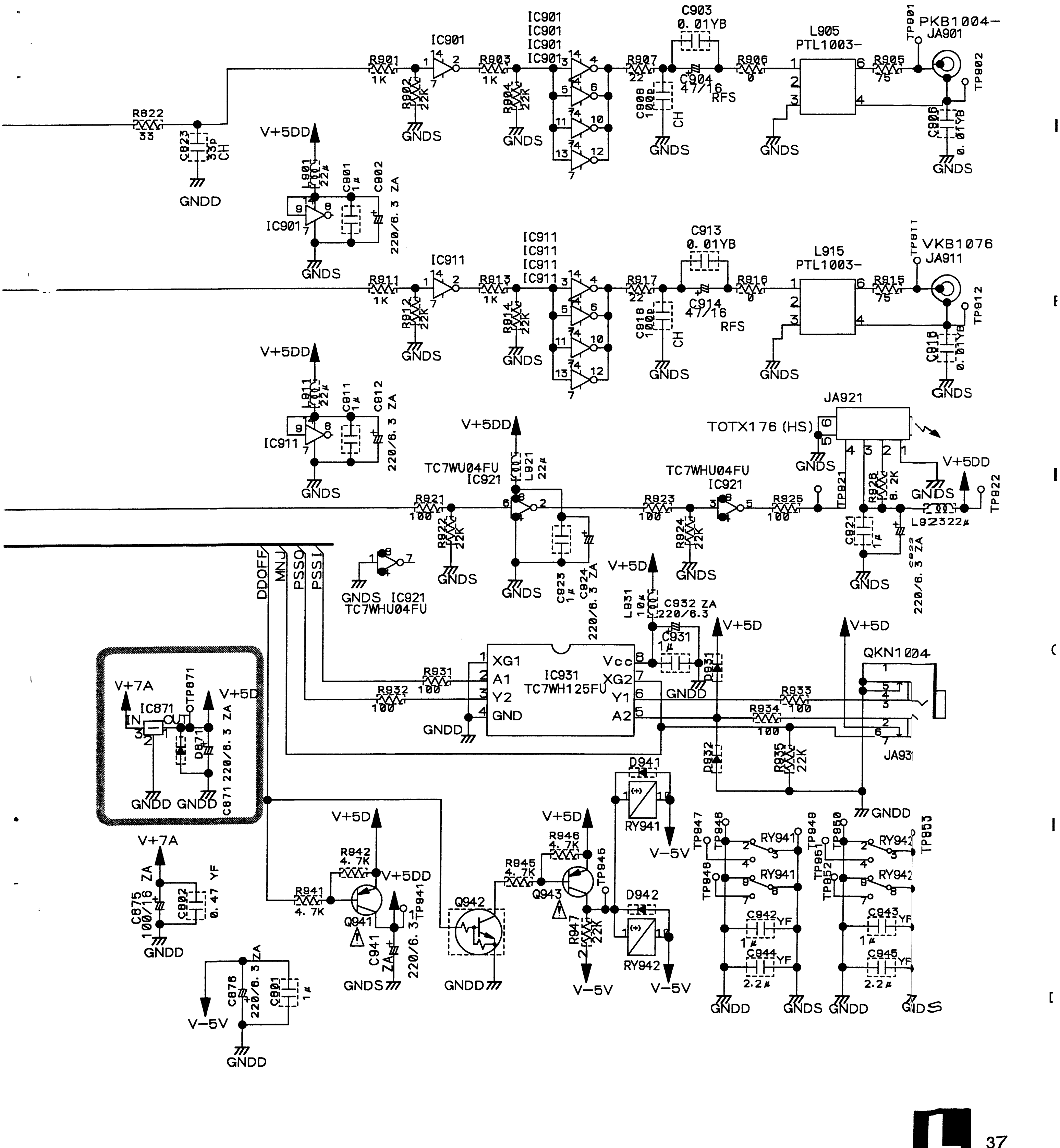
Q351 Q361	2SC2412K (RS)	IC351 IC371	NJM4580L
Q371 Q373 Q381	2SA1037K (RS)	IC352 IC372	ICP-N38
Q352 Q362	2SC3178 (YG)	IC361 IC381	ICP-N25
Q372 Q382	2SA1202 (YG)	RY301 RY331	RSR1020–
Q374 Q375	DTC124EK	D301 D331	MA111
D351 D352 D371 D372	UDZ5. 6B	C313 C343	VCE1034–
D301 D381	UDZ3. 6B	C353 C363 C373 C383	CMA101J2H
C351 C371	VCH1126–		
C356 C376	VCH1148–		

3.12 DOUT ASSY

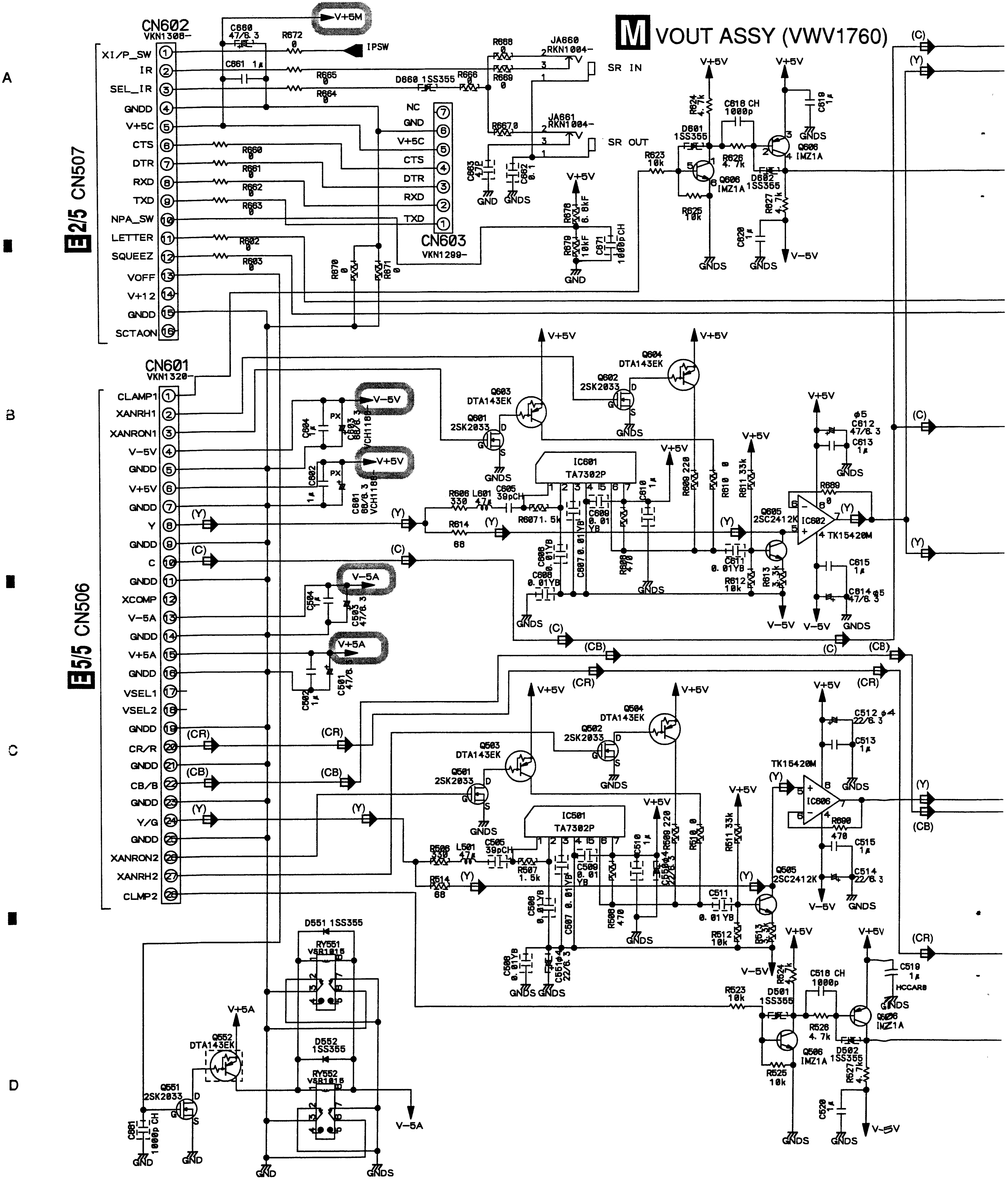

53047-1510
CN801
TP801
SI
SCK
DOCS
AC-3
GNDD
V-5E
PCM
GNDD
DIN
GNDD
V+7A
PSSO
PSSI
MNJACK
GNDD
E 4/5
CN508
C852 10p CH
C853 10p CH
R801 33
R802 33
R803 33
R804 33
R805 33
R806 0
R807 33
R808 33
R809 33
TP802
TP803
TP804
TP805
TP806
TP807
TP808
TP809
TP810
TP811
TP812
C804 100p CH
C805 100p CH
C803 100p CH
V-5V
V+7A
V+5D
L811 100 10μ
IC811
TC74VHC595FT
R811 33
R812 33
R813 33
R814 33
R815 33
R816 33
R817 33
QB
QC
QD
QE
QF
QG
QH
GND
Vcc
QA
SI
XG
RCK
SCK
XSCLR
QH'
R818 33
C811 1μ
DMODE
COA
DDOFF
XTOFF
IC821
TC74VHC153FT
1XG
B
1C3
1C2
1C1
1C0
1Y
GND
2XG
A
2C3
2C2
2C1
2C0
2Y
R9821 0
C821 1μ
DD/P
R821 33
C822 33p CH
THRU
PCM
IC831
TC74VHC153FT
Q831
R831 10K
L831 100 10μ
C831 1μ
R832 33
C832 33p CH
R833 33
C833 33p CH
TOSIN
COAIN
IC841
R9841 0
C841 1μ
R841 33
Q861
R861 10K
R9861 0
C861 1μ
Q862
Q863
R862 4.7K
R863 4.7K
TP861
V+5T
C863 220/6.3 ZA
Q864
Q865
R865 4.7K
R866 4.7K
TP865
V+5COA
C865 220/6.3 ZA
IC861
R855 10K
R887 10K
GNDD

L DOUT ASSY (VWG2162)

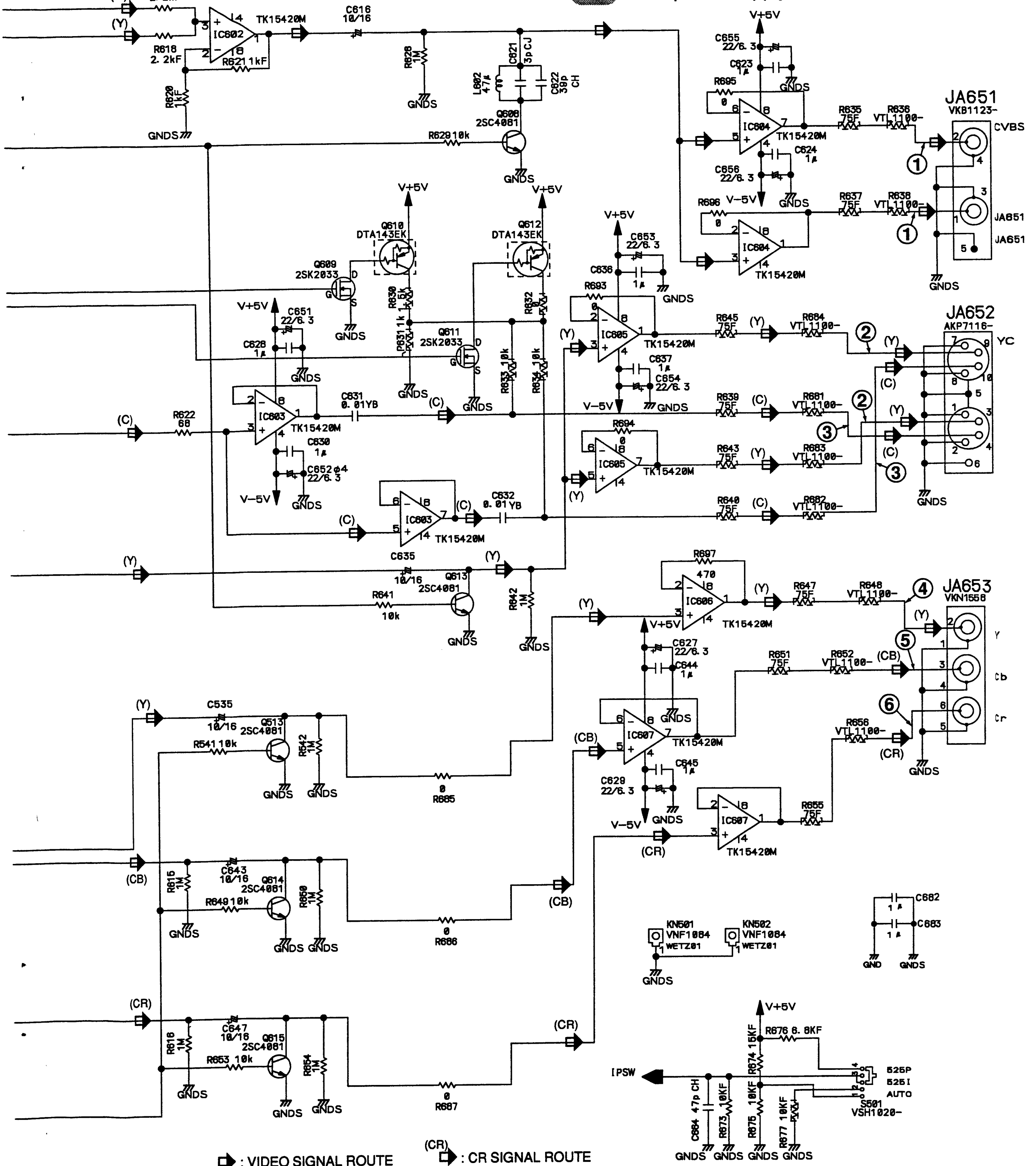
: The power supply is shown with the marked box.


IC901
R901 1K
R902 22K
R903 1K
R904 22K
R907 22
C903 0.01YB
C904 47/16 RFS
C908 100p CH
R906 0
L905 PTL1003-
R905 75
TP901
PKB1004-
JA901
TP902
C906 0.01YB
R822 33
C823 33p CH
GNDD
GNDS
V+5DD
L901 22μ
C901 1μ
C902 220/6.3 ZA
IC911
R911 1K
R912 22K
R913 1K
R914 22K
R917 22
C913 0.01YB
C914 47/16 RFS
C918 100p CH
R916 0
L915 PTL1003-
R915 75
TP911
VKB1076
JA911
TP912
C916 0.01YB
L911 22μ
C911 1μ
C912 220/6.3 ZA
JA921
TOTX176 (HS)
TC7WU04FU
IC921
L921 22μ
R921 100
R922 22K
C923 1μ
C924 220/6.3 ZA
TC7WHU04FU
R923 100
R924 22K
R925 100
TP921
R926 8.2K
C921 1μ
C922 220/6.3 ZA
L923 22μ
TP922
V+5D
DDOFF
MNJ
PSSO
PSSI
GNDS IC921 TC7WHU04FU
L931 10μ
C932 ZA 220/6.3
C931 1μ
D931
IC931 TC7WH125FU
XG1
A1
Y2
GND
Vcc
XG2
Y1
A2
R931 100
R932 100
R933 100
R934 100
R935 22K
D932
QKN1004
JA93
V+7A
IC871
IN
OUT
TP871
D871
C871 220/6.3 ZA
D941
RY941
D942
RY942
V-5V
R941 4.7K
R942 4.7K
Q941
C941 220/6.3 ZA
TP941
Q942
R945 4.7K
R946 4.7K
Q943
TP945
R947 22K
TP947
TP946
TP948
TP949
TP950
TP951
TP952
TP953
RY941
RY942
C942 1μ YF
C943 1μ YF
C944 2.2μ YF
C945 2.2μ YF
C875 100/16 ZA
C902 0.47 YF
C876 220/6.3 ZA
C901 1μ

3.13 VOUT ASSY


M VOUT ASSY (VWV1760)
CN602
VKN1308-
XI/P_SW
IR
SEL_IR
GNDD
V+5C
CTS
DTR
RXD
TXD
NPA_SW
LETTER
SQUEEZ
VOFF
V+12
GNDD
SCTAON
E 2/5 CN507
V+5M
IPSW
C660 47/6.3
C661 1μ
R672 0
R665 0
R664 0
R660 0
R661 0
R662 0
R663 0
R602 0
R603 0
R670 0
R671 0
D660 1SS355
R666 0
R668 0
R669 0
R6670
JA660 RKN1004-
JA661 RKN1004-
SR IN
SR OUT
C663 47p
C662 0.1
NC
GND
V+5C
CTS
DTR
RXD
TXD
CN603
VKN1299-
V+5V
R678 6.8kF
R679 10kF
C671 1000pCH
GND
GNDS
R623 10k
R624 4.7k
C618 CH 1000p
C619 1μ
D601 1SS355
R626 4.7k
Q606 IMZ1A
D602 1SS355
R625 10k
R627 4.7k
C620 1μ
V-5V
(C)
(Y)
CN601
VKN1320-
CLAMP1
XANRH1
XANRON1
V-5V
GNDD
V+5V
GNDD
Y
GNDD
C
GNDD
XCOMP
V-5A
GNDD
V+5A
GNDD
VSEL1
VSEL2
GNDD
CR/R
GNDD
CB/B
GNDD
Y/G
GNDD
XANRON2
XANRH2
CLMP2
E 5/5 CN506
C604 1μ
C603 68/6.3 VCH1188
C602 1μ
C601 68/6.3 VCH1188
PX
V-5V
V+5V
C504 1μ
C503 47/6.3
V-5A
V+5A
C502 1μ
C501 47/6.3
Q603 DTA143EK
Q601 2SK2033
Q604 DTA143EK
Q602 2SK2033
IC601 TA7302P
R606 330
L601 47μ
C605 39pCH
R6071.5k
R614 68
C606 0.01YB
C607 0.01YB
C608 0.01YB
C609 0.01 YB
C610 1μ
R608 470
R609 220
R610 0
R611 33k
C611 0.01YB
R612 10k
R613 3.3k
Q605 2SC2412K
IC602 TK15420M
φ5 C612 47/6.3
C613 1μ
R689 0
C615 1μ
C614 φ5 47/6.3
(CB)
(CR)
Q503 DTA143EK
Q501 2SK2033
Q504 DTA143EK
Q502 2SK2033
IC501 TA7302P
R506 330
L501 47μ
C505 39pCH
R507 1.5k
R514 68
C506 0.01YB
C507 0.01YB
C508 0.01YB
C509 0.01 YB
C510 1μ
C550 φ4 22/6.3
C551 φ4 22/6.3
R508 470
R509 220
R510 0
R511 33k
C511 0.01 YB
R512 10k
R513 3.3k
Q505 2SC2412K
IC506 TK15420M
C512 φ4 22/6.3
C513 1μ
R690 470
C515 1μ
C514 22/6.3
R523 10k
R524 4.7k
C518 CH 1000p
C519 1μ
HCCAR8
D501 1SS355
R526 4.7k
Q506 IMZ1A
D502 1SS355
R525 10k
R527 4.7k
C520 1μ
D551 1SS355
RY551 VSR1015
D552 1SS355
RY552 VSR1015
V-5A
Q552 DTA143EK
Q551 2SK2033
C681 1000p CH
GND
GNDS

: The power supply is shown with the marked box.


(C)
(Y)
R617 2.2kF
R618 2.2kF
IC602
TK15420M
R621 1kF
R620 1kF
GNDS
C616 10/16
R628 1M
L602 47μ
C621 3p CJ
C622 39p CH
Q608 2SC4081
R629 10k
V+5V
V-5V
C655 22/6.3
C623 1μ
R695 0
IC604
TK15420M
C624 1μ
C656 22/6.3
R635 75F
R636 VTL1100-
JA651
VKB1123-
CVBS
R696 0
R637 75F
R638 VTL1100-
①
Q610 DTA143EK
Q612 DTA143EK
Q609 2SK2033
R630 1.5k
R632 1.5k
R631 1k
Q611 2SK2033
R633 10k
R634 10k
C651 22/6.3
C628 1μ
IC603
TK15420M
R622 68
C631 0.01YB
C630 1μ
C652 22/6.3
C653 22/6.3
C636 1μ
R693 0
IC605
TK15420M
C637 1μ
C654 22/6.3
R645 75F
R684 VTL1100-
JA652
AKP7116-
YC
R639 75F
R681 VTL1100-
R694 0
R643 75F
R683 VTL1100-
R640 75F
R682 VTL1100-
②
③
C632 0.01YB
C635 10/16
Q613 2SC4081
R641 10k
R642 1M
R697 470
IC606
TK15420M
R647 75F
R648 VTL1100-
④
⑤
⑥
JA653
VKN1558
Y
Cb
Cr
C627 22/6.3
C644 1μ
R651 75F
R652 VTL1100-
(CB)
(CR)
IC607
TK15420M
C629 22/6.3
C645 1μ
R656 VTL1100-
R655 75F
C535 10/16
Q513 2SC4081
R541 10k
R542 1M
R685 0
R615 1M
C643 10/16
Q614 2SC4081
R649 10k
R650 1M
R686 0
R616 1M
C647 10/16
Q615 2SC4081
R653 10k
R654 1M
R687 0
KN501 VNF1084 WETZ01
KN502 VNF1084 WETZ01
C682 1μ
C683 1μ
GND
IPSW
R676 6.8KF
R674 15KF
C684 47p CH
R673 10KF
R675 10KF
R677 10KF
S501 VSH1020-
525P
525I
AUTO

➪ : VIDEO SIGNAL ROUTE

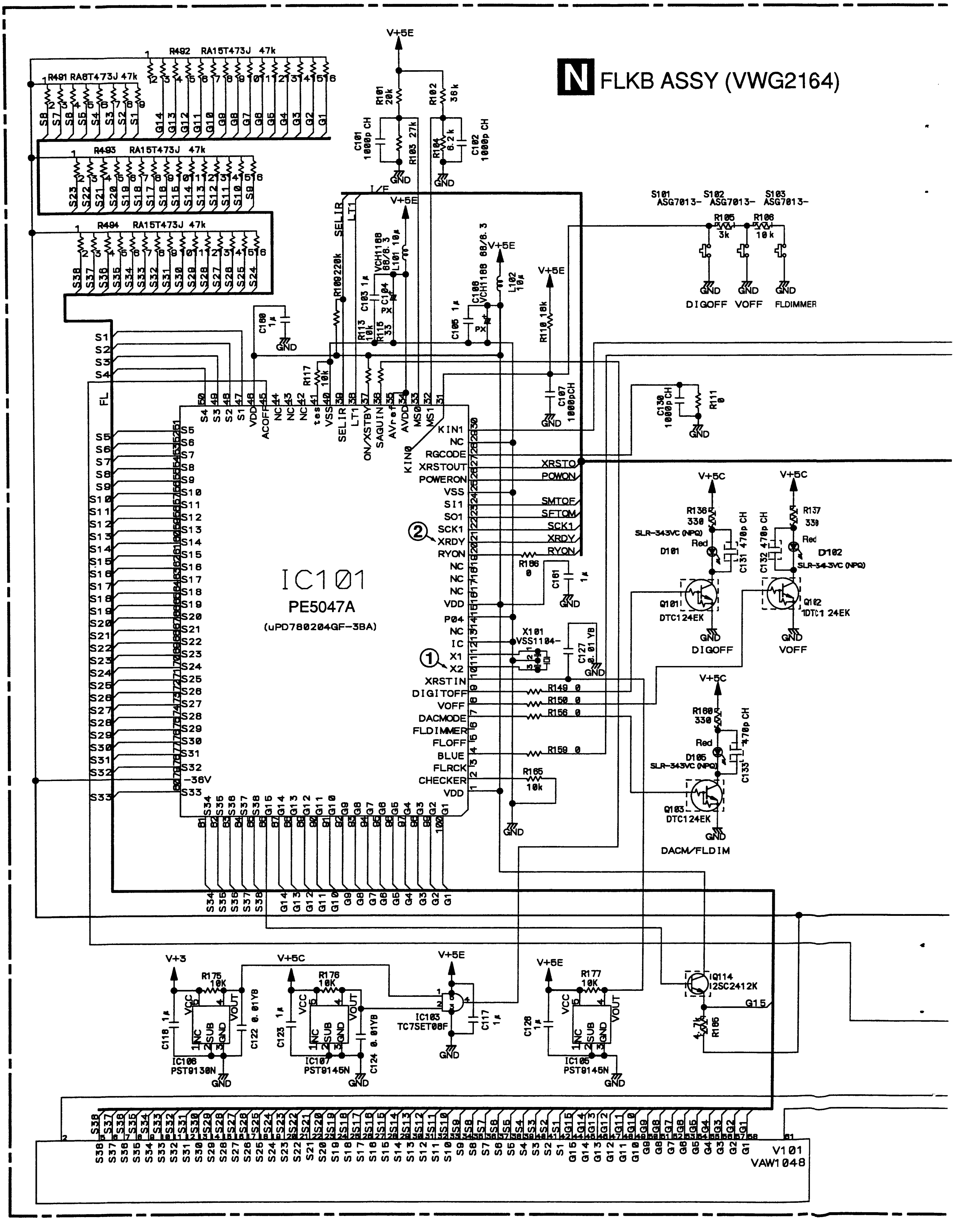
(Y) ➪ : Y SIGNAL ROUTE

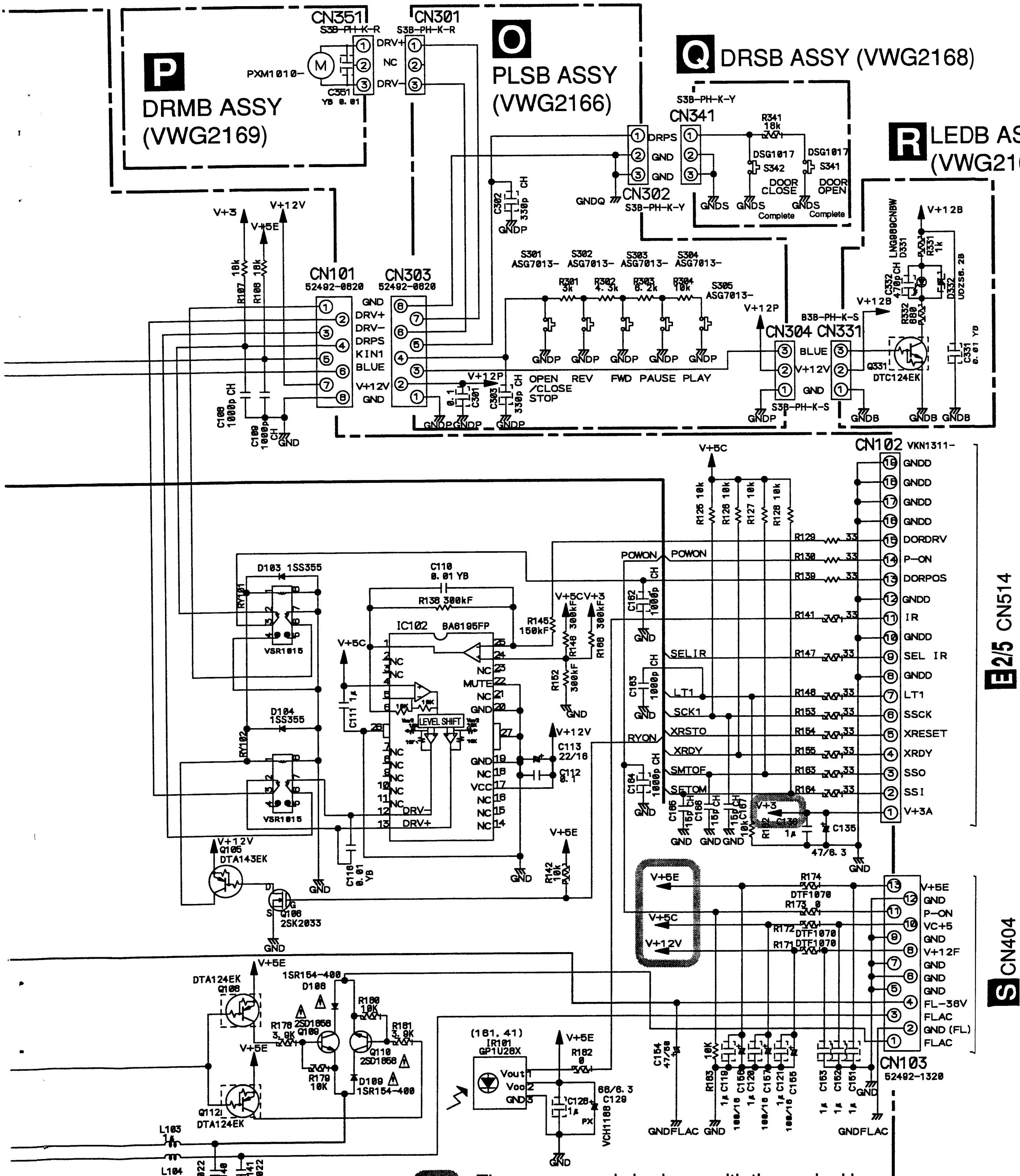
(C) ➪ : C SIGNAL ROUTE

(CR) ➪ : CR SIGNAL ROUTE

(CB) ➪ : CB SIGNAL ROUTE

3.14 FLKB, PLSB, DRMB, DRSB and LEDB ASSYS


A
B
C
D
N FLKB ASSY (VWG2164)
IC101
PE5047A
(uPD780204GF-3BA)
R491 RA8T473J 47k
R492 RA15T473J 47k
R493 RA15T473J 47k
R494 RA15T473J 47k
V+5E
R101 20k
R102 36k
C101 1000p CH
C102 1000p CH
R103 27k
R104 8.2k
I/F
SELIR
LT1
R100 220k
VCH1168 68/6.3
L101 10µ
C103 1µ
C104 PX
R113 10k
R115 33
C100 1µ
C105 1µ
C106 VCH1168 68/6.3 PX
L102 10µ
R110 10k
C107 1000pCH
R117 10k
S101 ASG7013-
S102 ASG7013-
S103 ASG7013-
R105 3k
R106 10k
DIGOFF
VOFF
FLDIMMER
GND
C130 1000p CH
R111 0
KIN1
NC
RGCODE
XRSTOUT
POWERON
VSS
SI1
SO1
SCK1
XRDY
RYON
VDD
P04
IC
X1
X2
XRSTIN
DIGITOFF
DACMODE
FLDIMMER
FLOFF
BLUE
FLRCK
CHECKER
KIN0
ON/XSTBY
SAGUIN
AVref
AVDD
MS0
MS1
tes
ACOFF
XRSTO
POWON
SMTOF
SFTOM
SCK1
XRDY
RYON
R186 0
C161 1µ
X101 VSS1104-
C127 0.01 YB
R149 0
R150 0
R156 0
R159 0
R165 10k
①
②
-36V
FL
V+5C
R136 330
R137 330
SLR-343VC (NPQ)
D101 Red
D102 Red
C131 470p CH
C132 470p CH
Q101 DTC124EK
Q102 DTC124EK
R160 330
D105 Red
C133 470p CH
Q103 DTC124EK
DACM/FLDIM
V+3
R175 10K
R176 10K
R177 10K
IC106 PST9130N
IC107 PST9145N
IC105 PST9145N
IC103 TC7SET08F
C118 1µ
C122 0.01YB
C123 1µ
C124 0.01YB
C117 1µ
C128 1µ
VCC
NC
SUB
GND
VOUT
Q114 2SC2412K
R185 4.7k
G15
V101
VAW1048


P DRMB ASSY (VWG2169)
O PLSB ASSY (VWG2166)
Q DRSB ASSY (VWG2168)
R LEDB ASSY (VWG2167)
CN351 S3B-PH-K-R
CN301 S3B-PH-K-R
PXM1010-
C351 YB 0.01
DRV+
NC
DRV-
CN341 S3B-PH-K-Y
CN302 S3B-PH-K-Y
DRPS
GND
GNDQ
R341 10k
DSG1017 S342 DOOR CLOSE
DSG1017 S341 DOOR OPEN
GNDS
Complete
C302 330p CH
GNDP
V+3
V+5E
V+12V
R107 18k
R108 18k
CN101 52492-0820
CN303 52492-0820
GND
DRV+
DRV-
DRPS
KIN1
BLUE
V+12V
C108 1000p CH
C109 1000p CH
S301 ASG7013-
S302 ASG7013-
S303 ASG7013-
S304 ASG7013-
S305 ASG7013-
R301 3k
R302 4.3k
R303 6.2k
R304 10k
OPEN /CLOSE STOP
REV
FWD
PAUSE
PLAY
C301 0.1
C303 330p CH
V+12P
CN304 CN331 B3B-PH-K-S
S3B-PH-K-S
V+12B
LNG009CNBW D331
R331 1k
C332 470p CH
R332 680
D332 UDZS6.2B
Q331 DTC124EK
C331 0.01 YB
GNDB
CN102 VKN1311-
GNDD
DORDRV
P-ON
DORPOS
IR
SEL IR
LT1
SSCK
XRESET
XRDY
SSO
SSI
V+3A
E 2/5 CN514
V+5C
R125 10k
R126 10k
R127 10k
R128 10k
R129 33
R130 33
R139 33
R141 33
R147 33
R148 33
R153 33
R154 33
R155 33
R163 33
R164 33
POWON
SELIR
SCK1
XRSTO
RYON
XRDY
SMTOF
SETOM
C162 1000p CH
C163 1000p CH
C164 1000p CH
C165 15p CH
C166 15p CH
C167 15p CH
C130 1μ
C135 47/6.3
D103 1SS355
D104 1SS355
RY101
RY102
VSR1015
C110 0.01 YB
R138 300kF
IC102 BA6195FP
LEVEL SHIFT
MUTE
VCC
R145 150kF
R148 300kF
R168 300kF
R152 300kF
C111 1μ
C113 22/16
C112 0.1
C116 0.01 YB
R142 10k
V+5CV+3
Q105 DTA143EK
Q106 2SK2033
V+5E
V+5C
V+12V
R174 DTF1070
R173 0
R172 DTF1070
R171 DTF1070
CN404
V+5E
GND
P-ON
VC+5
V+12F
FL-36V
FLAC
GND (FL)
S CN404
CN103 52492-1320
C154 47/6
R163 10K
C118 1μ
C156 100/16
C120 1μ
C157 100/16
C121 1μ
C155 100/16
C153 1μ
C152 1μ
C151 1μ
GNDFLAC
DTA124EK Q108
Q112 DTA124EK
1SR154-400 D108
D109 1SR154-400
R178 3.9K
Q109 2SD1858
R179 10K
R180 10K
R181 3.9K
Q110 2SD1858
(161, 41) IR101 GP1U28X
Vout
Vcc
R182 0
C128 1μ
C129 68/6.3
VCH1188
PX
L103 1μ
L104 1μ
C140 0.022
C141 0.022

: The power supply is shown with the marked box.

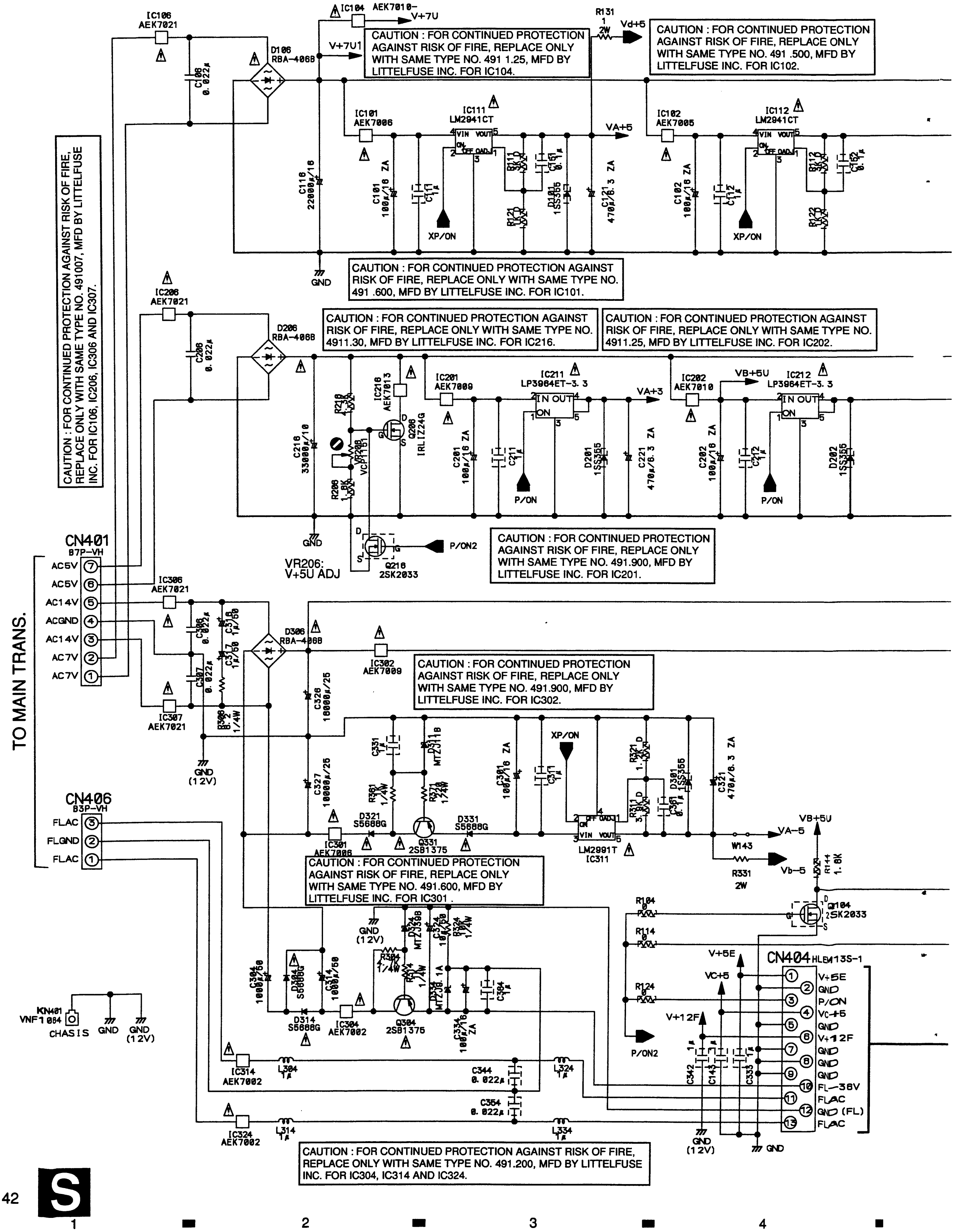
FLKB ASSY
S101 : DIGITAL DATA OFF
S102 : VIDEO OFF
S103 : FLDIMMER

PLSB ASSY
S301 : ■/⏏
S302 : ⏮
S303 : ⏭
S304 : ⏸
S305 : ▶

DRSB ASSY
S341 : DOOR OPEN
S342 : DOOR CLOSE
S301 Linkage

N O P Q R

3.15 SYPS and FANB ASSYS



CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491 1.25, MFD BY LITTELFUSE INC. FOR IC104.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491 .500, MFD BY LITTELFUSE INC. FOR IC102.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491007, MFD BY LITTELFUSE INC. FOR IC106, IC206, IC306 AND IC307.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491 .600, MFD BY LITTELFUSE INC. FOR IC101.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 4911.30, MFD BY LITTELFUSE INC. FOR IC216.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 4911.25, MFD BY LITTELFUSE INC. FOR IC202.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491.900, MFD BY LITTELFUSE INC. FOR IC201.

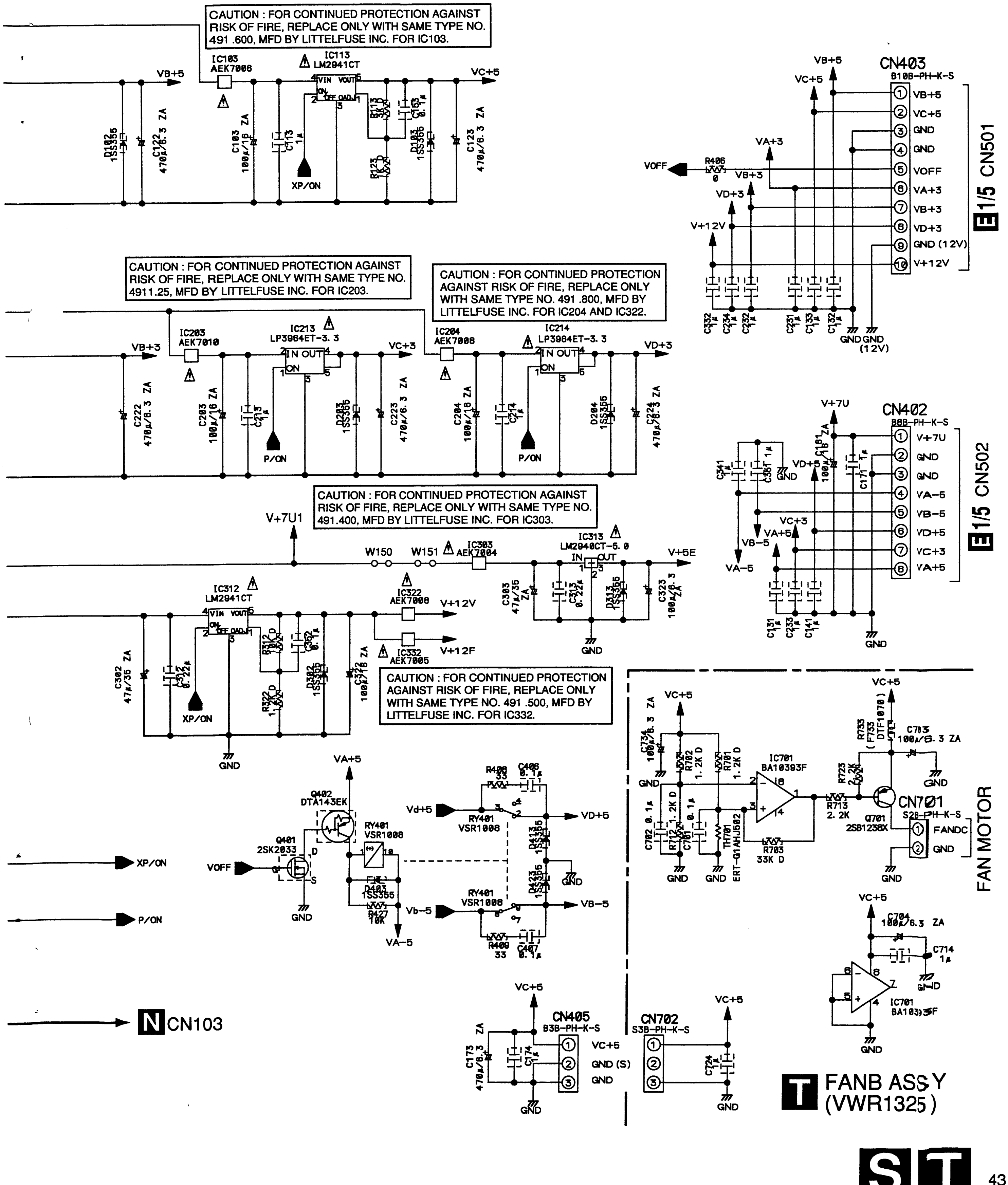
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491.900, MFD BY LITTELFUSE INC. FOR IC302.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491.600, MFD BY LITTELFUSE INC. FOR IC301 .

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491.200, MFD BY LITTELFUSE INC. FOR IC304, IC314 AND IC324.

A
B
C
D
IC106 AEK7021
C106 0.022μ
D106 RBA-406B
IC104 AEK7010-
V+7U
V+7U1
R131 1 2W
Vd+5
C116 22000μ/16
IC101 AEK7006
C101 100μ/16 ZA
C111 1μ
IC111 LM2941CT
VIN VOUT
ON/OFF
ADJ
R111 3k9 D
R121 1k D
C151 0.1μ
D101 1SS355
VA+5
C121 470μ/6.3 ZA
XP/ON
IC102 AEK7005
C102 100μ/16 ZA
C112 1μ
IC112 LM2941CT
R112 3k9 D
R122 1k D
C162 0.1μ
GND
IC206 AEK7021
C206 0.022μ
D206 RBA-406B
C216 33000μ/10
R218 4.3k
IC216 AEK7013
Q206 IRLIZ24G
VR206
R208 1.8k
IC201 AEK7009
C201 100μ/16 ZA
C211 1μ
IC211 LP3964ET-3.3
IN OUT
ON
VA+3
D201 1SS355
C221 470μ/6.3 ZA
P/ON
IC202 AEK7010
VB+5U
IC212 LP3964ET-3.3
C202 100μ/16 ZA
C212 1μ
D202 1SS355
P/ON2
Q216 2SK2033
VR206: V+5U ADJ
CN401 B7P-VH
AC5V ⑦
AC5V ⑥
AC14V ⑤
ACGND ④
AC14V ③
AC7V ②
AC7V ①
TO MAIN TRANS.
IC306 AEK7021
C306 0.022μ
C316 1μ/50
C317 1μ/50
C307 0.022μ
IC307 AEK7021
R306 8.2 1/4W
GND (12V)
D306 RBA-406B
C326 10000μ/25
C327 10000μ/25
IC302 AEK7009
C331 1μ
D311 MTZJ11B
R361 1/4W
R371 1/4W
C301 100μ/16 ZA
C311 1μ
XP/ON
R321 1.2k D
R311 3.9k D
C361 0.1μ
D301 1SS355
C321 470μ/6.3 ZA
D321 S5688G
Q331 2SB1375
D331 S5688G
IC301 AEK7006
LM2991T IC311
VA-5
W143
R331 2W
Vb-5
VB+5U
R144 1.8k
R104 0
R114 0
R124 0
Q104 2SK2033
CN406 B3P-VH
FLAC ③
FLGND ②
FLAC ①
GND (12V)
C304 1000μ/50
D304 S5688G
C314 1000μ/50
D314 S5688G
IC304 AEK7002
R304 1/4W
R314 1/4W
D324 MTZJ39B
C324 100μ/50
R324 1/4W
Q304 2SB1375
D334 MTZJ3.1A
C334 100μ/16 ZA
C394 1μ
KN401 VNF1084
CHASIS
GND
GND (12V)
IC314 AEK7002
L304 1μ
C344 0.022μ
L324 1μ
IC324 AEK7002
L314 1μ
C354 0.022μ
L334 1μ
V+5E
VC+5
V+12F
P/ON2
C342 1μ
C143 1μ
C333 1μ
GND (12V)
GND
CN404 HLEM13S-1
① V+5E
② GND
③ P/ON
④ VC+5
⑤ GND
⑥ V+12F
⑦ GND
⑧ GND
⑨ GND
⑩ FL-36V
⑪ FLAC
⑫ GND (FL)
⑬ FLAC

S SYPS ASSY (VWR1324)



CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491 .600, MFD BY LITTELFUSE INC. FOR IC103.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 4911.25, MFD BY LITTELFUSE INC. FOR IC203.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491 .800, MFD BY LITTELFUSE INC. FOR IC204 AND IC322.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491.400, MFD BY LITTELFUSE INC. FOR IC303.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491 .500, MFD BY LITTELFUSE INC. FOR IC332.

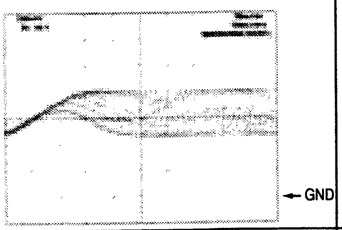
IC103 AEK7006
IC113 LM2941CT
VB+5
VC+5
D102 1SS355
C122 470μ/6.3 ZA
C103 100μ/16 ZA
C113 1μ
R113
C163 0.1μ
D103 1SS355
R123
C123 470μ/6.3 ZA
XP/ON
CN403 B10B-PH-K-S
① VB+5
② VC+5
③ GND
④ GND
⑤ VOFF
⑥ VA+3
⑦ VB+3
⑧ VD+3
⑨ GND (12V)
⑩ V+12V
E 1/5 CN501
VOFF
R406 0
VA+3
VB+3
VD+3
V+12V
C332 C234 C232 C231 C133 C132
GND GND (12V)
IC203 AEK7010
IC213 LP3964ET-3.3
IC204 AEK7006
IC214 LP3964ET-3.3
VB+3
VC+3
VD+3
C222 470μ/6.3 ZA
C203 100μ/16 ZA
C213 1μ
D203 1SS355
C223 470μ/6.3 ZA
C204 100μ/16 ZA
C214 1μ
D204 1SS355
C224 470μ/6.3 ZA
P/ON
CN402 B8B-PH-K-S
① V+7U
② GND
③ GND
④ VA−5
⑤ VB−5
⑥ VD+5
⑦ VC+3
⑧ VA+5
E 1/5 CN502
V+7U
C341 1μ
C351 1μ
C161 100μ/16 ZA
C171 1μ
VD+5
VC+3
VA+5
VB−5
VA−5
C131 C233 C141
GND
V+7U1
W150 W151
IC303 AEK7004
IC313 LM2940CT-5.0
IN OUT
V+5E
C303 47μ/35 ZA
C313 0.22μ
D313 1SS355
C323 100μ/6.3 ZA
IC312 LM2941CT
IC322 AEK7008
V+12V
IC332 AEK7005
V+12F
C302 47μ/35 ZA
C312 0.22μ
R312
C352 0.1μ
R322
D302 1SS355
C372 100μ/16 ZA
XP/ON
GND
VA+5
Q402 DTA143EK
Q401 2SK2033
VOFF
RY401 VSR1008
D403 1SS355
R427 10K
VA−5
R408 33
C406 0.1μ
Vd+5
VD+5
D413 1SS355
D423 1SS355
Vb−5
VB−5
R409 33
C407 0.1μ
XP/ON
P/ON
N CN103
VC+5
C734 100μ/6.3 ZA
R702 1.2K D
R701 1.2K D
IC701 BA10393F
C702 0.1μ
R712 1.2K D
C701 0.1μ
TH701 ERT-Q1AHJ502
R703 33K D
R713 2.2K
R723 2.2K
R733 (F733) DTF1070
C703 100μ/6.3 ZA
Q701 2SB1238X
CN701 S2B-PH-K-S
① FANDC
② GND
FAN MOTOR
GND
C704 100μ/6.3 ZA
C714 1μ
IC701 BA10393F
CN405 B3B-PH-K-S
① VC+5
② GND (S)
③ GND
C173 470μ/6.3 ZA
C174 1μ
CN702 S3B-PH-K-S
C724 1μ
T FANB ASSY (VWR1325)

■ WAVEFORMS

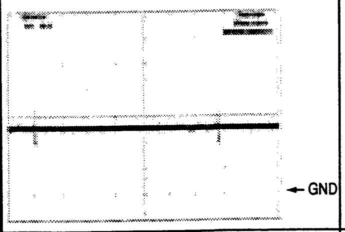
Note : The encircled numbers denote measuring point in the schematic diagram.

● DVDM ASSY

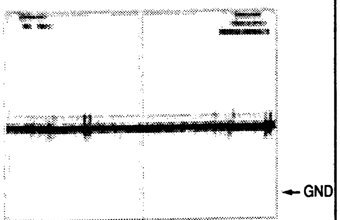
① CN201 - pin 5, 6 (RFO)
V: 1V/div. H: 50nsec/div.
(at DVD PLAY)



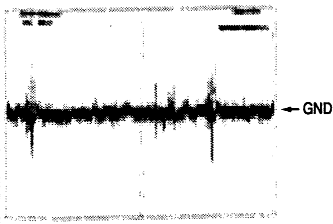
② CN201 - pin 9, 10 (TE)
V: 1V/div. H: 5msec/div.
(at DVD PLAY)



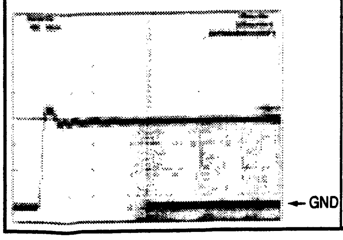
③ CN201 - pin 13, 14 (FDO)
V: 1V/div. H: 5msec/div.
(at DVD PLAY)



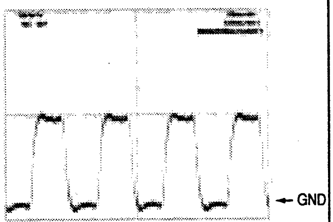
④ CN201 - pin 1, 2 (FE)
V: 100mV/div. H: 5msec/div.
(at DVD PLAY)



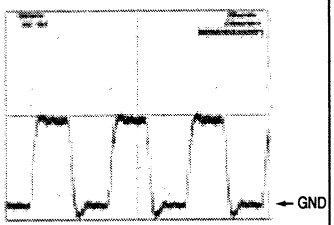
⑤ IC201 - pin 1 (EFMOUT)
V: 1V/div. H: 5msec/div.
(at DVD PLAY)



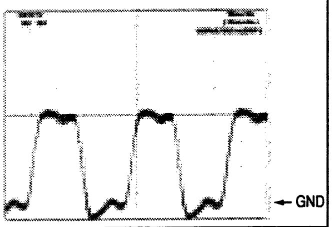
⑥ Foot of R612 (20M)
V: 1V/div. H: 20nsec/div.
(at DVD PLAY)



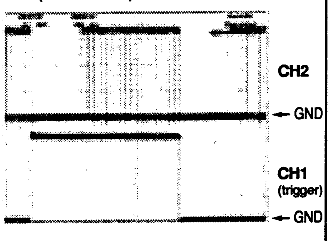
⑦ Foot of R981 (16M)
V: 1V/div. H: 20nsec/div.
(at DVD PLAY)



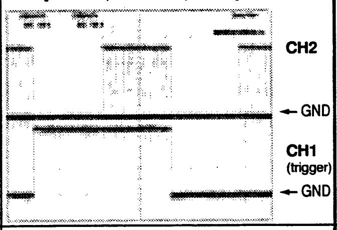
⑧ Foot of R973 (27M)
V: 1V/div. H: 10nsec/div.
(at DVD PLAY)



⑨ CD DATA
CH1 : IC201 - pin 5→IC701 - pin 110
→IC801 - pin 81→IC904 - pin 5
→Foot of R913
CH2 : IC201 - pin 3→IC701 - pin 111
→IC801 - pin 71→IC901 - pin 5
→IC902 - pin 4→Foot of R912
V: 1V/div. H: 2μsec/div.
(at CD PLAY)

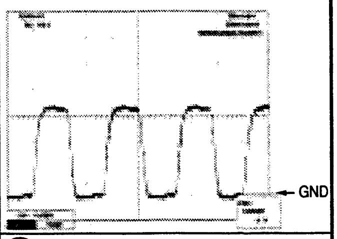


⑩ Compression DATA
CH1 : Foot of R6010
CH2 : Foot of R6011
V: 1V/div. H: 2μsec/div.
[at DVD (AC-3, DTS) PLAY]

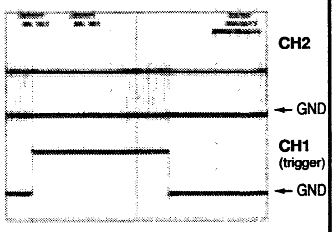


● DSPB ASSY

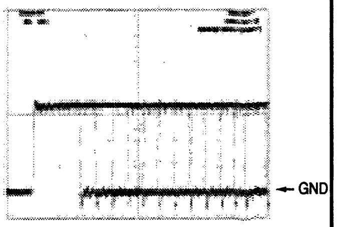
① Foot of R140 (HCKT)
V: 1V/div. H: 20nsec/div.
[at DVD-A (48k, 96k, 192k) PLAY]



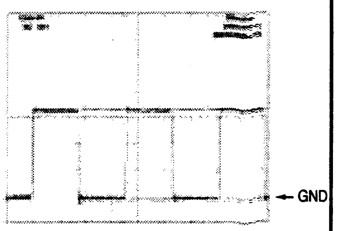
② DVD-A DATA
CH1 : Foot of R135→Foot of R257
→Foot of R148
CH2 : IC101 - pin 4,5,6→
IC201 - pin 4,5,6
V: 2V/div. H: 2μsec/div.
[at DVD-A (48k, 5.1ch) PLAY]



③ IC801 - pin 81 (SEDO)
V: 1V/div. H: 50nsec/div.
(at SACD PLAY)

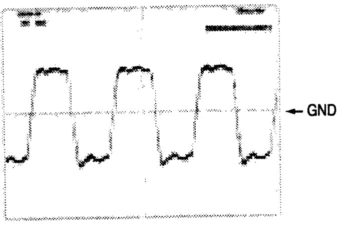


④ Foot of R803 (DSDL)
Foot of R804 (DSDR)
V: 1V/div. H: 200nsec/div.
(at SACD PLAY)

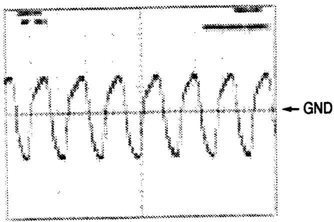


● MAUD ASSY

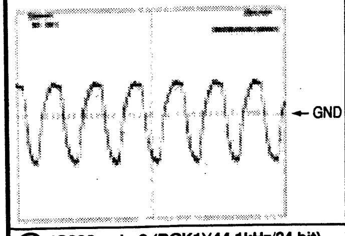
① **Foot of R620 (DIRCLK)**
V: 1V/div. H: 20nsec/div.



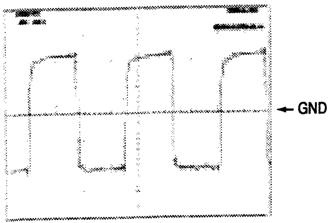
② **Foot of R622 (36M)**
V: 1V/div. H: 20nsec/div.



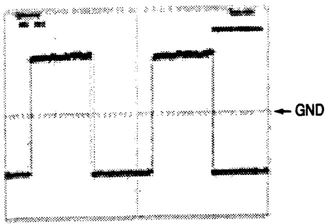
③ **Foot of R621 (33M)**
V: 1V/div. H: 20nsec/div.



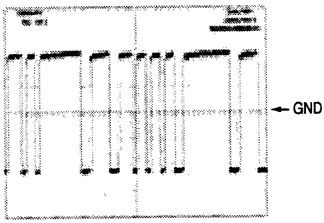
④ **IC603 - pin 8 (BCK1)(44.1kHz/24 bit)**
V: 1V/div. H: 200msec/div.



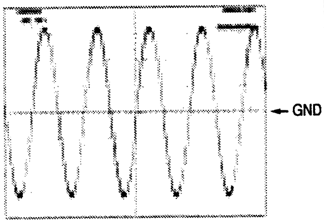
⑤ **IC603 - pin 6 (LRCK1)(44.1kHz/24 bit)**
V: 1V/div. H: 5μsec/div.



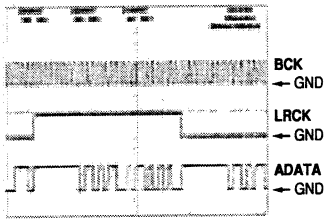
⑥ **IC603 - pin 4 (ADATA1)**
IC603 - pin 2 (ADATA2)
(44.1kHz/24 bit)
V: 1V/div. H: 2μsec/div.



⑦ **IC741 - pin 7, IC751 - pin 7,**
IC761 - pin 7, IC771 - pin 7
(Analog Output)(44.1kHz/24 bit)
V: 1V/div. H: 500μsec/div.

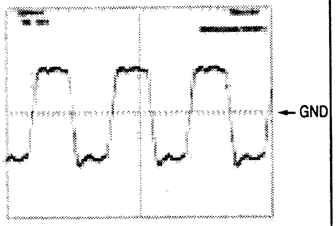


⑧ **BCK, LRCK, ADATA (44.1kHz/24 bit)**
V: 5V/div. H: 2μsec/div.

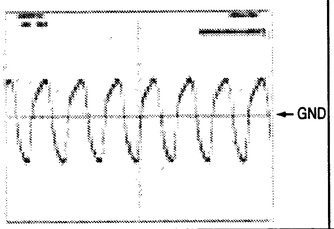


● AUDIO ASSY

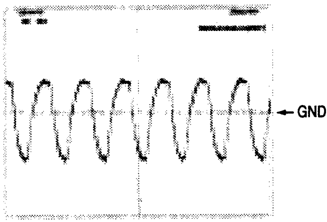
① **Foot of R108 (DIRCLK)**
V: 1V/div. H: 20nsec/div.



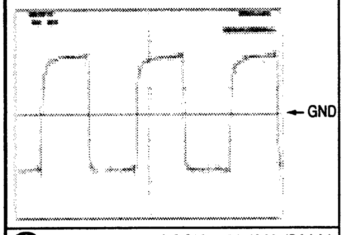
② **Foot of R124 (36M)**
V: 1V/div. H: 20nsec/div.



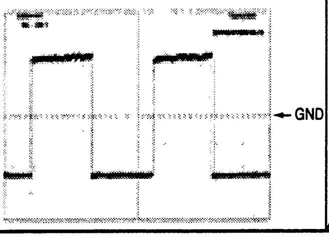
③ **Foot of R114 (33M)**
V: 1V/div. H: 20nsec/div.



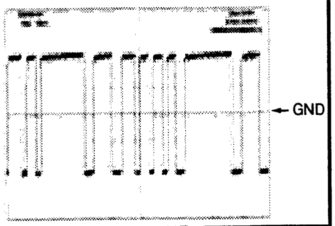
④ **IC131 - pin 15 (BCK1)(44.1kHz/24 bit)**
V: 1V/div. H: 200msec/div.



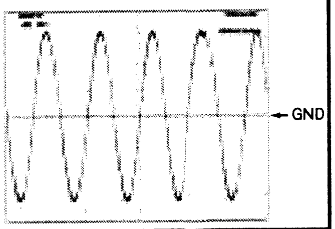
⑤ **IC131 - pin 14 (LRCK1)(44.1kHz/24 bit)**
V: 1V/div. H: 5μsec/div.



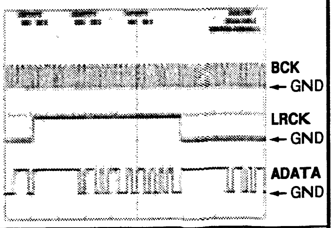
⑥ **IC131 - pin 14 (DATA1)(44.1kHz/24 bit)**
V: 1V/div. H: 2μsec/div.



⑦ **IC311 - pin 7, IC331 - pin 7 ,**
IC361 - pin 7, IC381 - pin 7
(Analog Output)(44.1kHz/24 bit)
V: 1V/div. H: 500μsec/div.

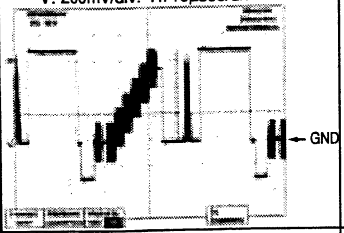


⑧ **BCK, LRCK, ADATA (44.1kHz/24 bit)**
V: 5V/div. H: 2μsec/div.

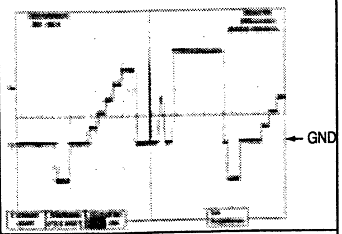


● VOUT ASSY

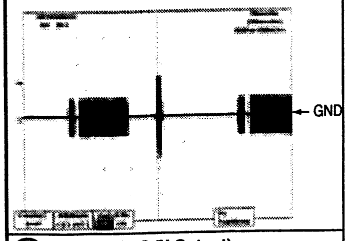
① **JA651 - pin 1, 2**
(Composite Video Out)
at play Composite Video Disc
(DVD-REF-A1 : T2-Chap. 1)
V: 200mV/div. H: 10µsec/div.



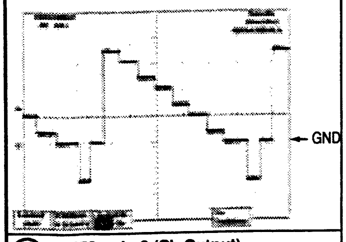
② **JA652 - pin 3, 9 (Y Output)**
at play Composite Video Disc
(DVD-REF-A1 : T2-Chap. 1)
V: 200mV/div. H: 10µsec/div.



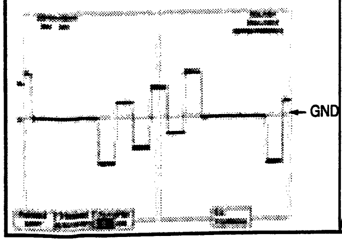
③ **JA652 - pin 4, 10 (C Output)**
at play Composite Video Disc
(DVD-REF-A1 : T2-Chap. 1)
V: 200mV/div. H: 10µsec/div.



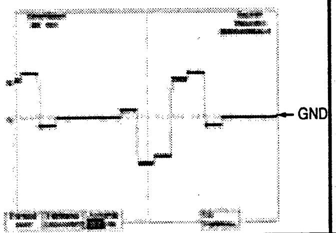
④ **JA653 - pin 2 (Y Output)**
at play Color Bar Signal
(DVD-REF-A1 : T2-Chap. 19)
V: 200mV/div. H: 5µsec/div.



⑤ **JA653 - pin 3 (Cb Output)**
at play Color Bar Signal
(DVD-REF-A1 : T2-Chap. 19)
V: 200mV/div. H: 5µsec/div.

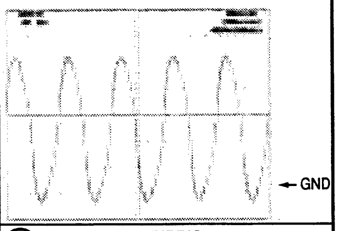


⑥ **JA653 - pin 6 (Cr Output)**
at play Color Bar Signal
(DVD-REF-A1 : T2-Chap. 19)
V: 200mV/div. H: 5µsec/div.

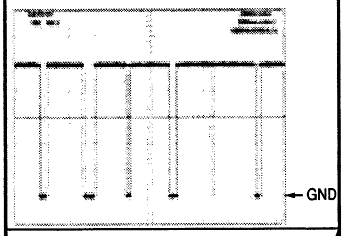


● FLKB ASSY

① **IC101 - pin 11 (X2)**
V: 1V/div. H: 100nsec/div.



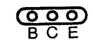
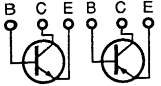
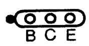
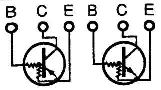
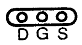
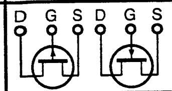
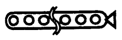
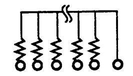
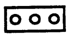
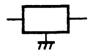
② **IC101 - pin 21 (XRDY)**
V: 1V/div. H: 20msec/div.



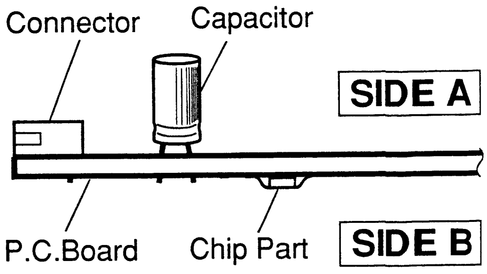
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

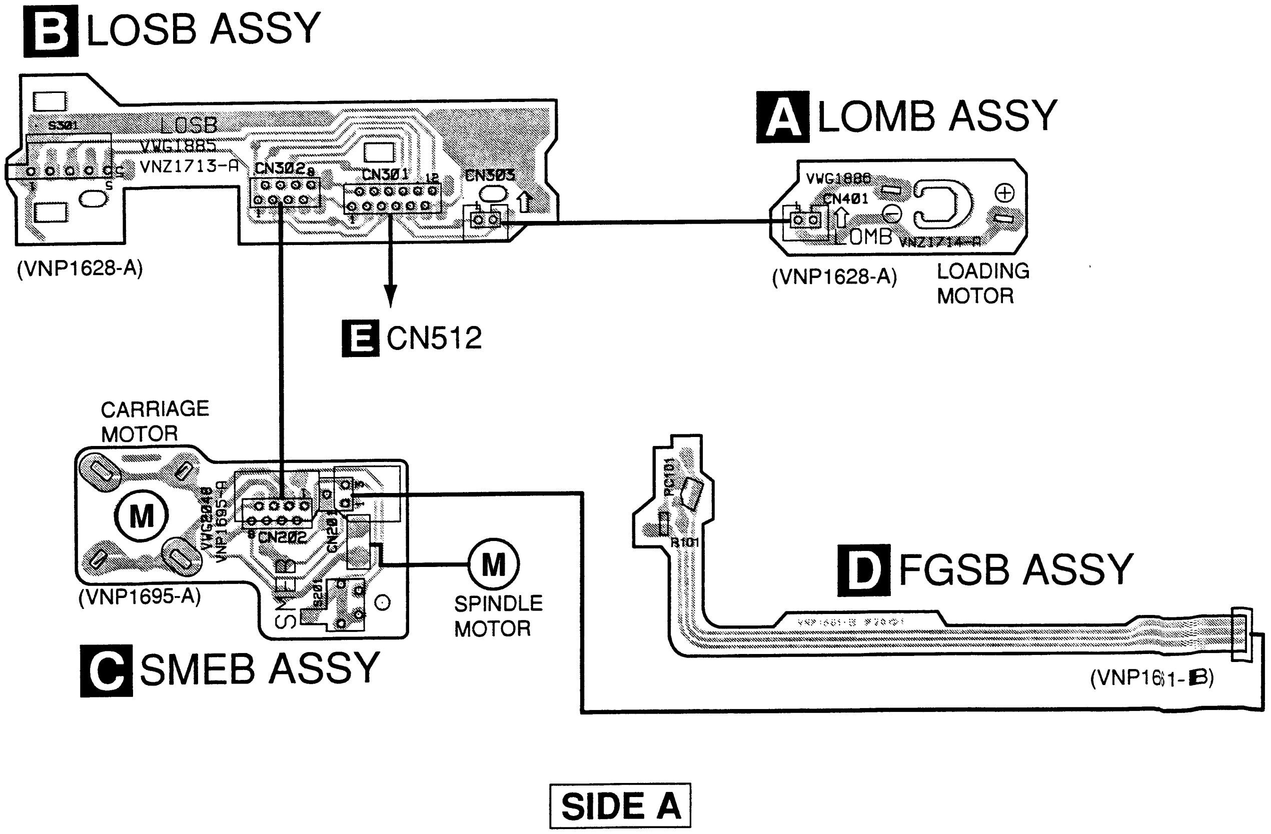
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.


Connector
Capacitor
SIDE A
P.C.Board
Chip Part
SIDE B

4.1 LOMB, LOSB, SMEB and FGSB ASSYS


B LOSB ASSY
S301
LOSB
VWG1885
VNZ1713-A
CN302
8
CN301
12
CN303
1
5
1
1
(VNP1628-A)
A LOMB ASSY
VWG1886
CN401
LOMB
VNZ1714-A
(VNP1628-A)
LOADING MOTOR
E CN512
CARRIAGE MOTOR
M
VWG2048
VNP1695-A
CN202
CN201
SMEB
R201
(VNP1695-A)
C SMEB ASSY
M
SPINDLE MOTOR
PC101
R101
D FGSB ASSY
(VNP1661-B)
SIDE A

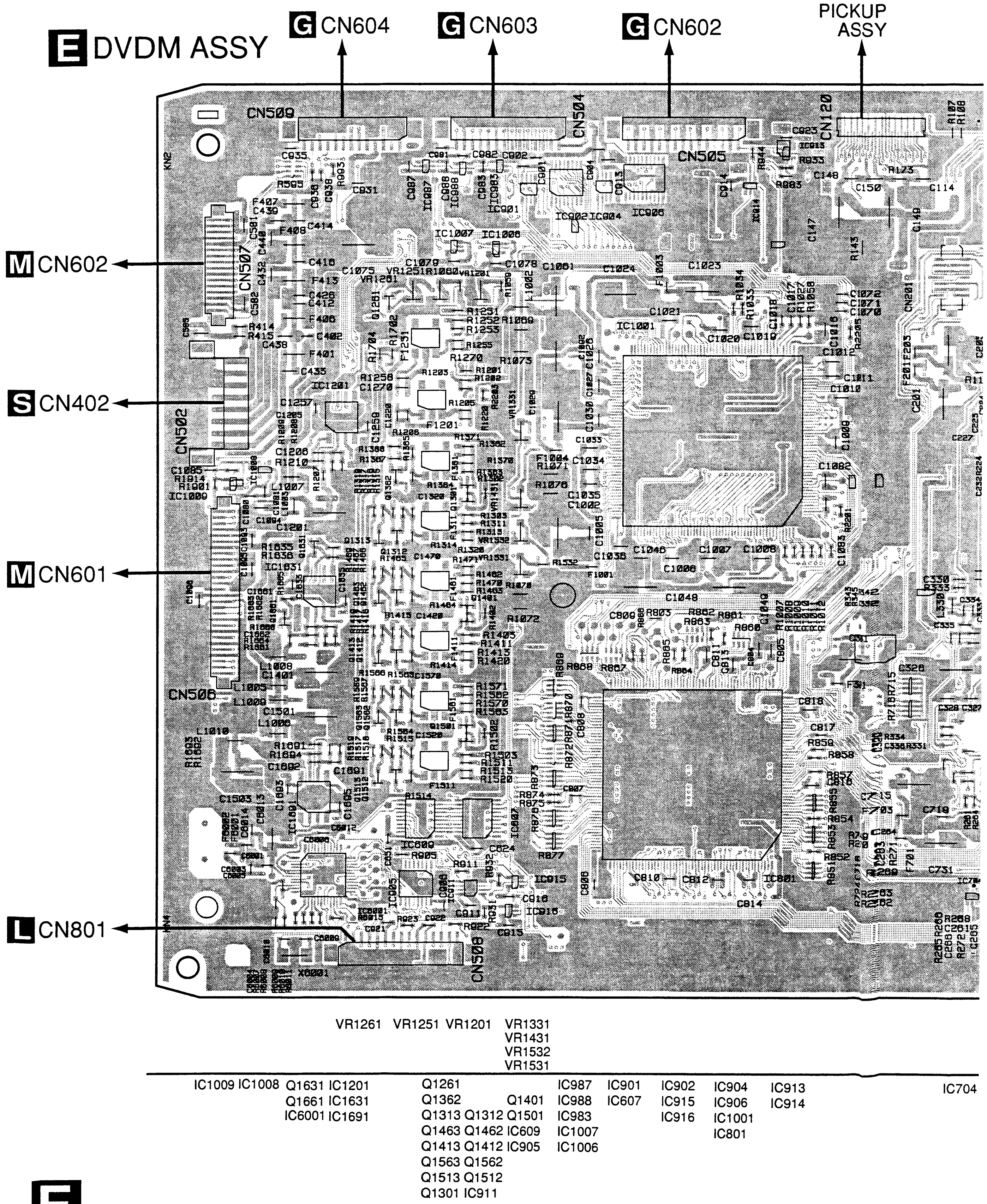
4.2 DVDM ASSY

A

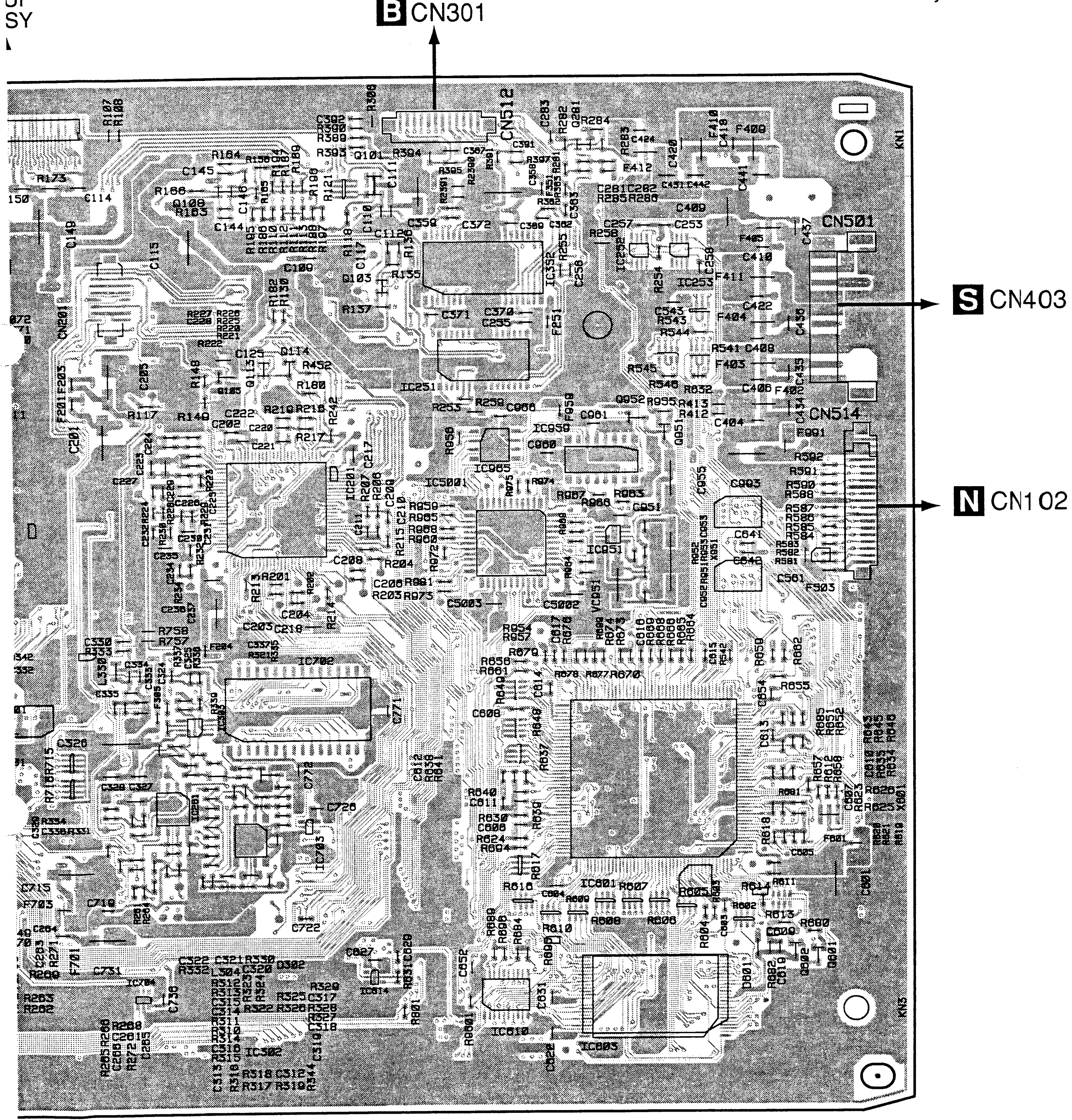
B

C

D


E DVDM ASSY
G CN604
G CN603
G CN602
PICKUP ASSY
M CN602
S CN402
M CN601
L CN801
CN509
CN504
CN505
CN120
CN507
CN502
CN506
CN508
VR1261 VR1251 VR1201 VR1331
VR1431
VR1532
VR1531
IC1009 IC1008 Q1631 IC1201
Q1661 IC1631
IC6001 IC1691
Q1261
Q1362 Q1401
Q1313 Q1312 Q1501
Q1463 Q1462 IC609
Q1413 Q1412 IC905
Q1563 Q1562
Q1513 Q1512
Q1301 IC911
IC987 IC901
IC988 IC607
IC983
IC1007
IC1006
IC902
IC915
IC916
IC904
IC906
IC1001
IC801
IC913
IC914
IC704

• This PCB is a six-layered board.


UP
SY
B CN301
S CN403
N CN102
CN512
CN501
CN514
KN1
KN3
IC352
IC251
IC253
IC252
IC959
IC965
IC5001
IC951
IC201
IC702
IC703
IC261
IC302
IC614
IC601
IC603
IC610
IC704

(VNP1749-C)

SIDE A

IC704	Q108	Q105	Q113	Q114	Q101	IC352	Q281	IC252	IC253	Q602	Q601
	IC261	IC303	IC201	IC614	Q103	IC251	IC959	Q952	Q951		
	IC302		IC702			IC965	IC951	IC601			
			IC703			IC5001		IC603			
						IC610					

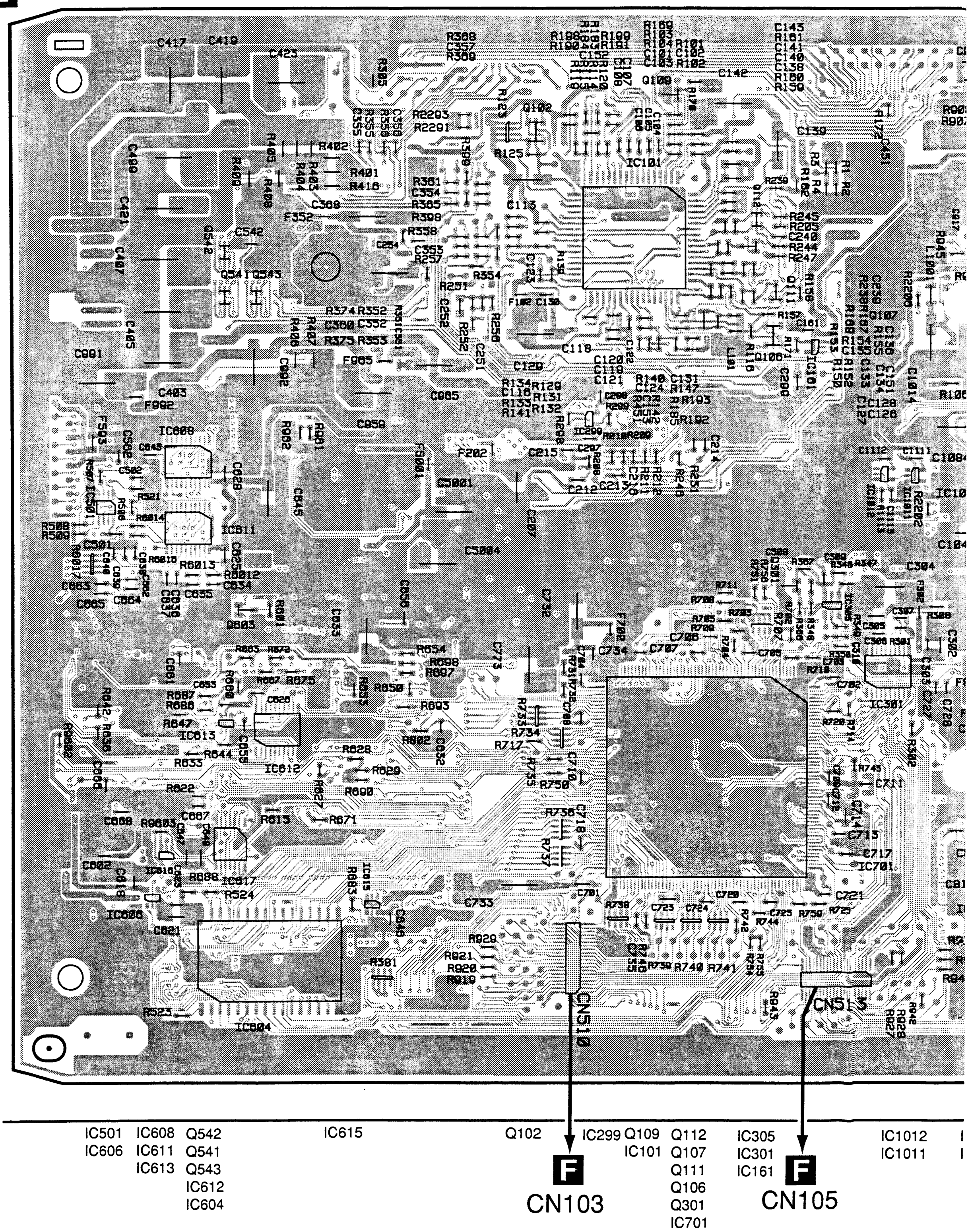
A

E DVDM ASSY

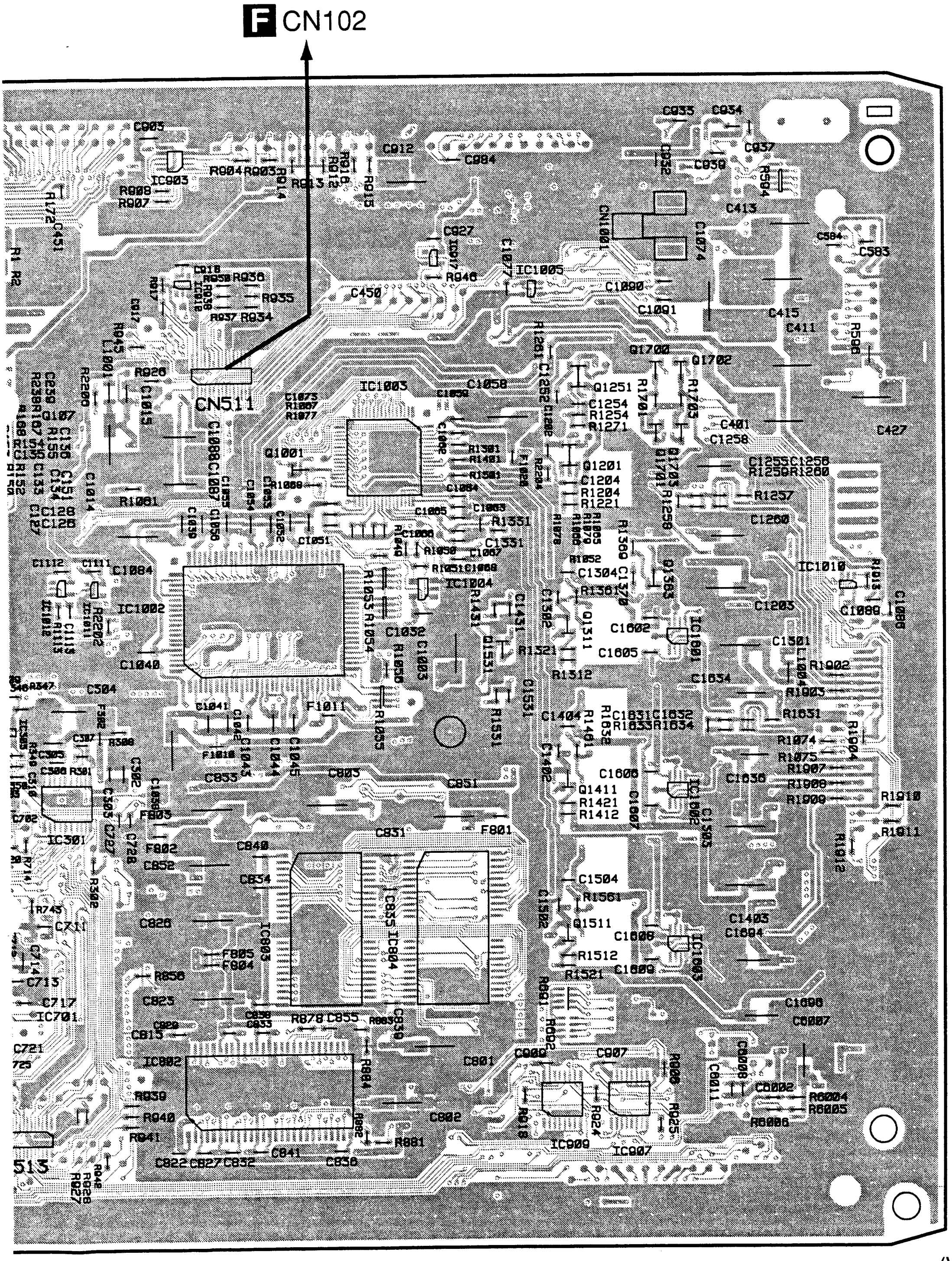
B

C

D


IC101
IC161
IC299
IC501
IC604
IC608
IC611
IC612
IC613
IC615
IC616
IC617
IC701
IC301
Q102
Q109
Q107
Q111
Q106
Q541
Q542
Q543
Q603
CN510
CN513
IC501 IC608 Q542
IC606 IC611 Q541
IC613 Q543
IC612
IC604
IC615
Q102
IC299 Q109
IC101
Q112
Q107
Q111
Q106
Q301
IC701
IC305
IC301
IC161
IC1012
IC1011
F
CN103
F
CN105

• This PCB is a six-layered board.


F CN102
CN511
IC903
IC1003
IC1002
IC1004
IC1005
IC1010
IC1601
IC1602
IC1603
IC1012
IC1011
IC301
IC701
IC802
IC803
IC804
IC909
IC907
CN1001
Q1001
Q1700
Q1702
Q1251
Q1201
Q1311
Q1411
Q1511
Q1531
Q1701
Q1703
Q1363
F801
F802
F803
F1011
C450
C1058
C1084
C1040
C831
C851
C853
C1403
C1604
513

(VNP1749-C)

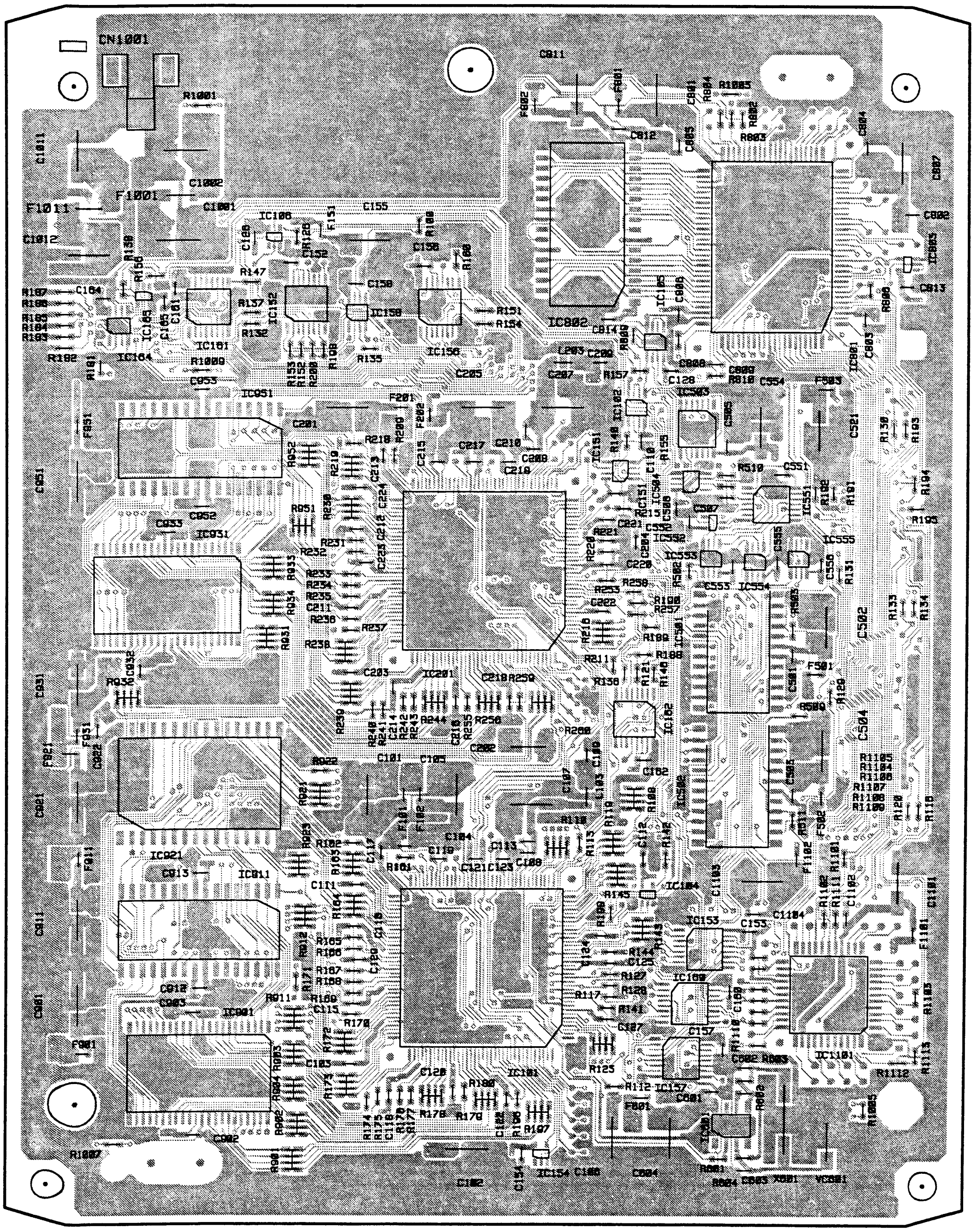
IC1012	IC903	Q1001	IC1003	IC917	IC1005	Q1700	Q1702	IC1010
IC1011	IC912	IC1002	IC803	IC1004	Q1251	Q1701	Q1703	
		IC802		IC804	Q1201	Q1363	IC1601	
					Q1311	IC1602	IC1603	
					Q1531	Q1411	IC907	
					IC909	Q1511		

SIDE B

4.3 DSPB ASSY

• This PCB is a four-layered board.

F DSPB ASSY


CN1001
R1001
C1011
C1002
F1001
F1011
C1001
C1012
IC106
C155
IC152
IC158
IC156
IC161
IC164
IC165
R1009
C953
IC951
C811
C812
IC802
IC801
IC803
C802
C813
IC102
IC503
IC151
IC504
IC551
IC552
IC553
IC554
IC555
C952
C933
IC931
IC201
IC501
C502
IC162
IC921
IC502
C504
IC911
IC104
IC153
C153
IC101
IC1101
IC160
IC157
IC901
IC601
IC154
C154
C602
R1007
X601
VC601
F601
F901
F911
F921
F931
F951
F201
F501
F502
F503
F1101

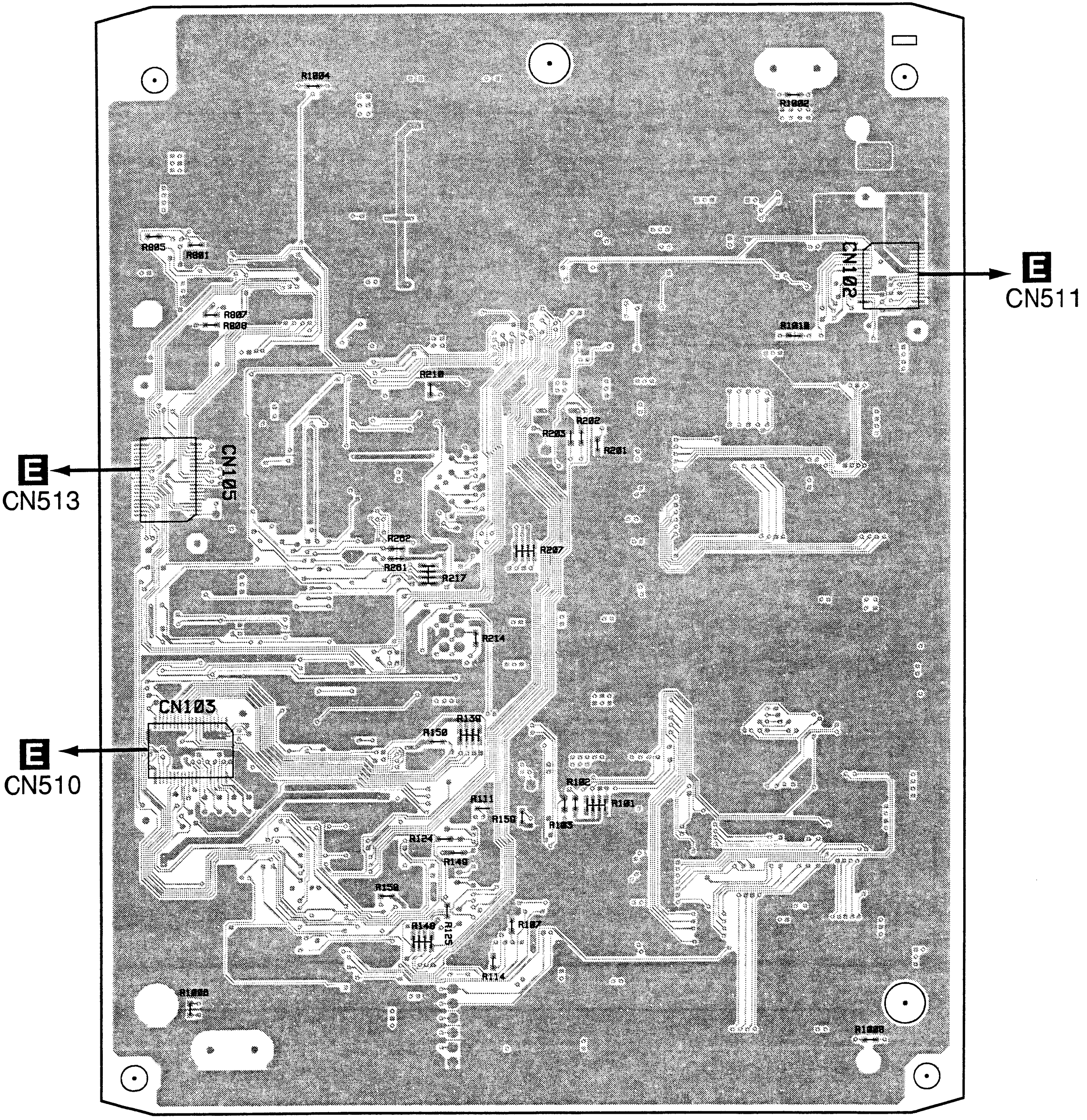
IC106 IC802 IC801
IC803
IC165 IC161 IC152 IC158
IC164 IC156 IC105
IC951 IC102 IC503
IC151 IC504 IC551
IC552
IC553 IC554 IC555
IC931 IC201
IC501
IC162
IC921 IC502
IC104
IC911 IC153
IC101
IC1101
IC160
IC901 IC157
IC601
IC154

(VNP1750-B)

SIDE A

- This PCB is a four-layered board.

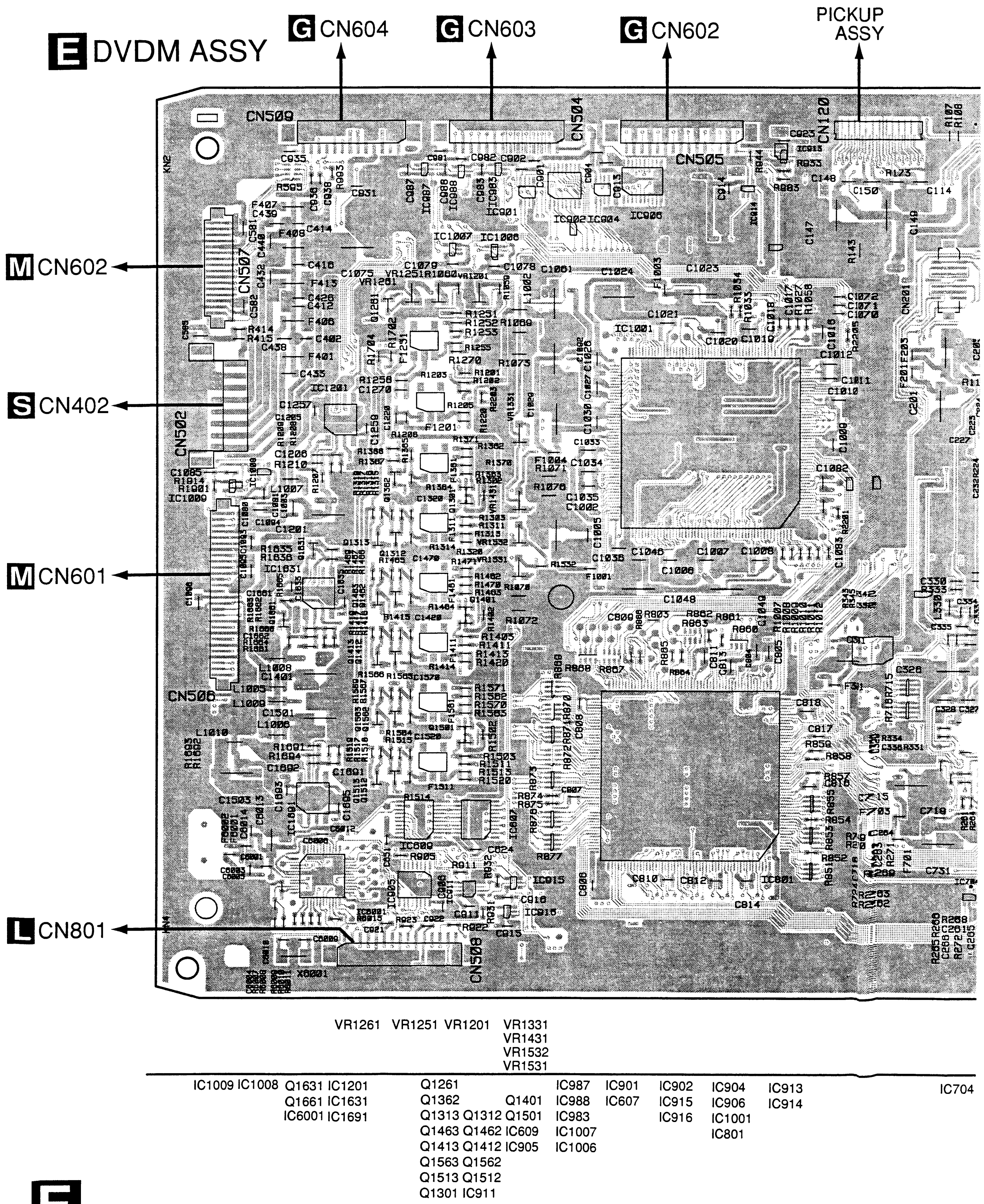
F DSPB ASSY


R1004
R1002
R805
R801
R807
R806
CN102
E
CN511
R1010
R210
R202
R203
R201
CN105
E
CN513
R202
R201
R217
R207
R214
CN103
E
CN510
R130
R150
R102
R101
R111
R150
R103
R124
R140
R150
R140
R125
R107
R114
R1000
R1000

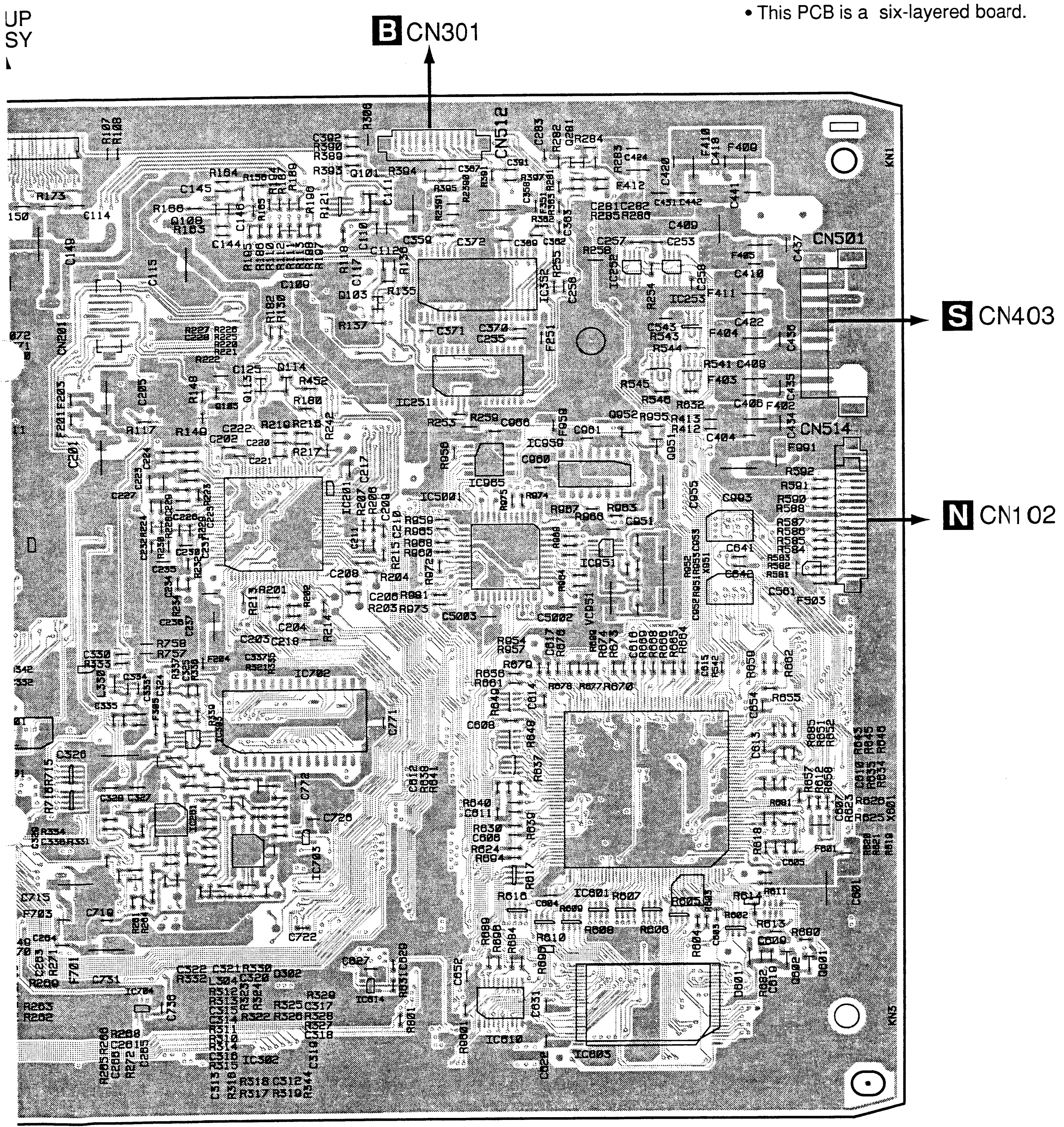
(VNP1750-B)

SIDE B

4.2 DVDM ASSY


E DVDM ASSY
G CN604
G CN603
G CN602
PICKUP ASSY
M CN602
S CN402
M CN601
L CN801
CN509
CN504
CN505
CN120
CN507
CN502
CN506
CN508
VR1261 VR1251 VR1201 VR1331
VR1431
VR1532
VR1531
IC1009 IC1008 Q1631 IC1201
Q1661 IC1631
IC6001 IC1691
Q1261
Q1362 Q1401
Q1313 Q1312 Q1501
Q1463 Q1462 IC609
Q1413 Q1412 IC905
Q1563 Q1562
Q1513 Q1512
Q1301 IC911
IC987 IC988 IC983 IC1007 IC1006
IC901 IC607
IC902 IC915 IC916
IC904 IC906 IC1001 IC801
IC913 IC914
IC704

• This PCB is a six-layered board.

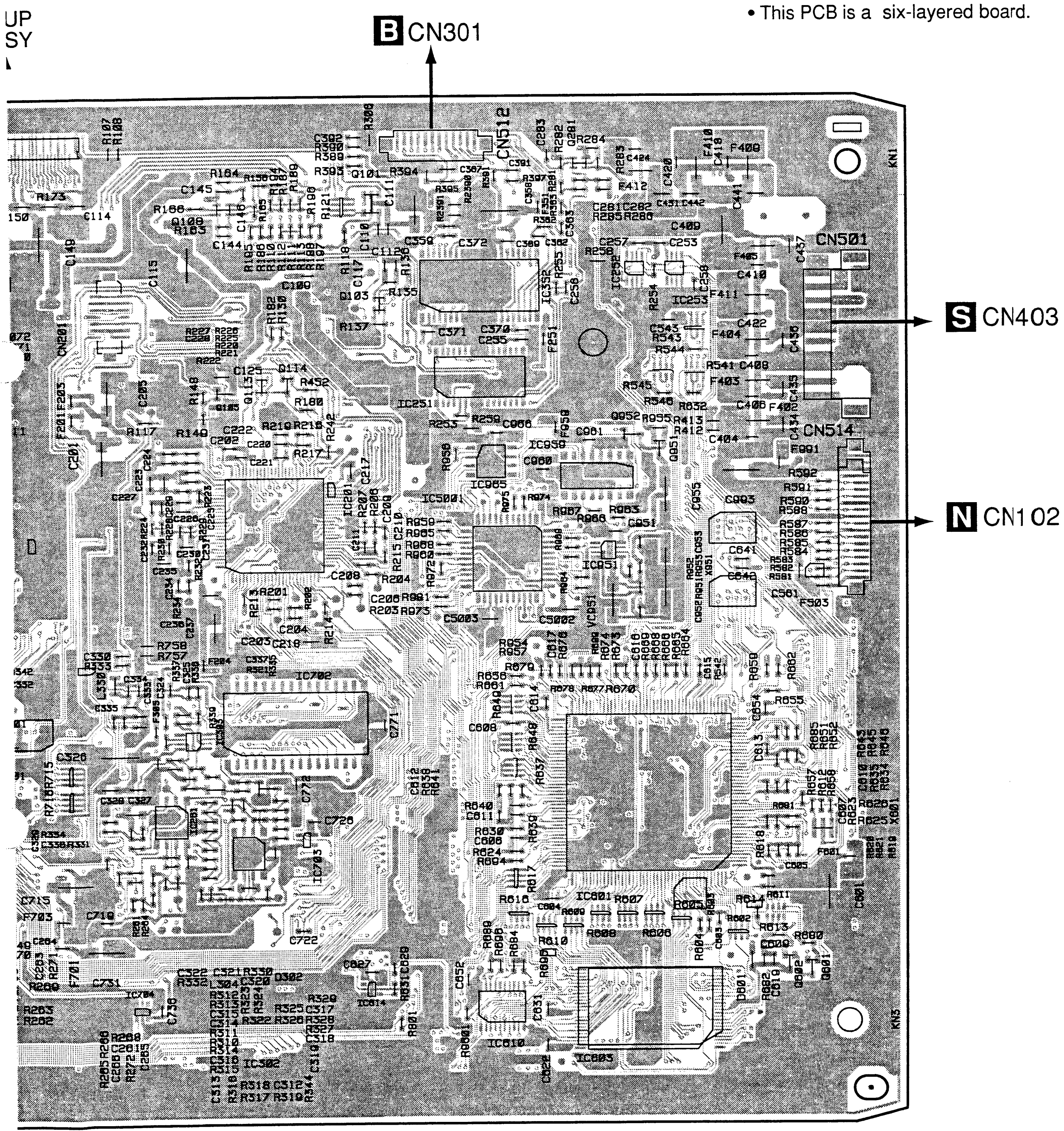

UP
SY
B CN301
S CN403
N CN102
CN512
CN501
CN514
CN201
KN1
KN3
IC251
IC352
IC201
IC5001
IC965
IC959
IC951
IC702
IC703
IC601
IC603
IC610
IC302
IC252
IC253

(VNP1749-C)

SIDE A

IC704	Q108 IC261 IC302	Q105 IC303	Q113 IC201 IC702 IC703	Q114 IC614	Q101 Q103	IC352 IC251 IC965 IC5001 IC610	Q281 IC959 IC951	IC252 Q952 IC601 IC603	IC253 Q951	Q602	Q601

• This PCB is a six-layered board.

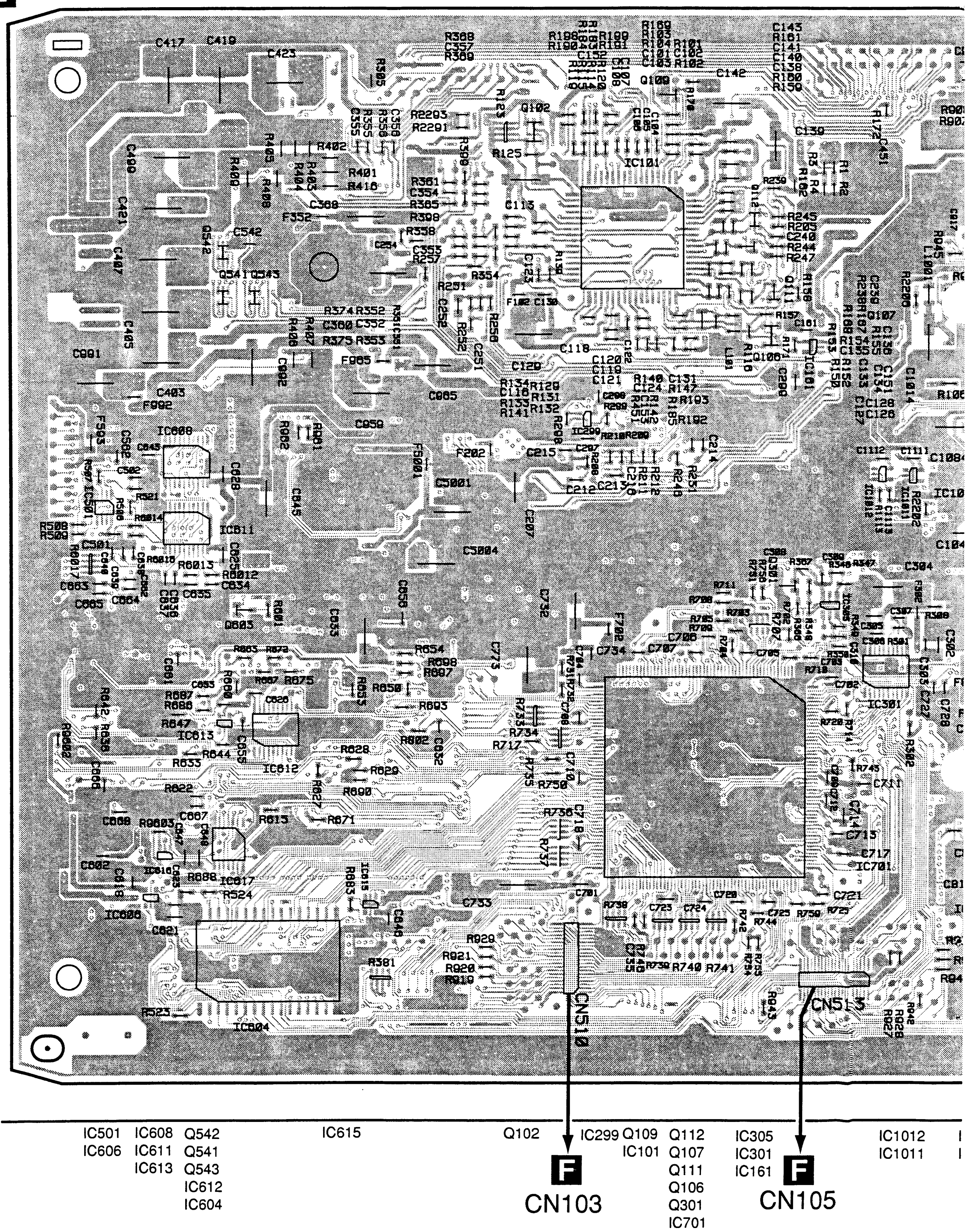

UP
SY
B CN301
CN512
CN501
S CN403
CN514
N CN102
IC352
IC251
IC252
IC253
IC959
IC965
IC5001
IC951
IC201
IC702
IC703
IC601
IC603
IC610
IC302
Q101
Q103
Q108
Q114
Q281
Q951
Q952
Q601
Q602
KN1
KN3

(VNP1749-C)

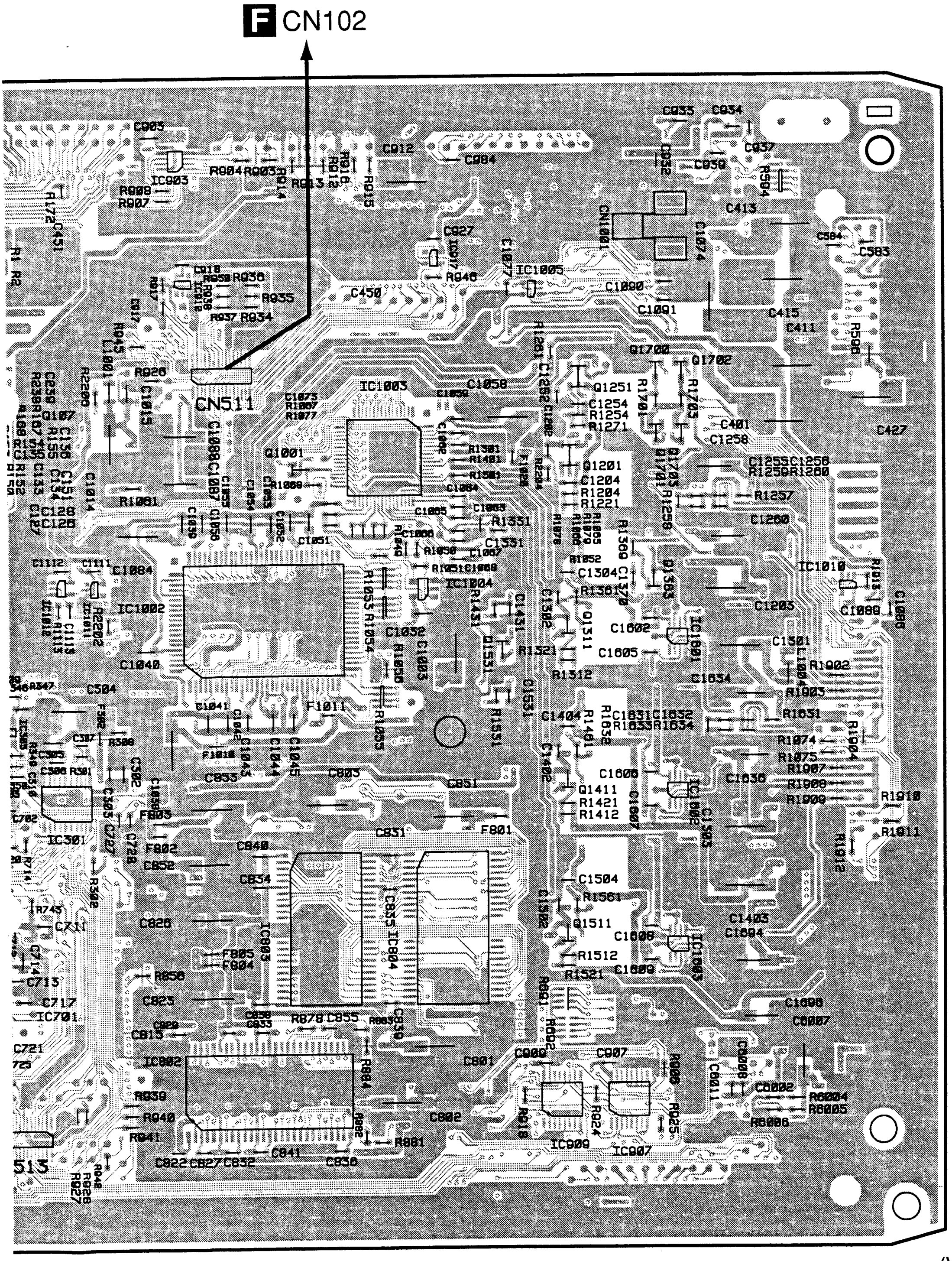
SIDE A

IC704	Q108 IC261 IC302	Q105 IC303	Q113 IC201 IC702 IC703	Q114 IC614	Q101 Q103	IC352 IC251 IC965 IC5001 IC610	Q281 IC959 IC951	IC252 Q952 IC601 IC603	IC253 Q951	Q602	Q601

E DVDM ASSY


A
B
C
D
CN510
CN513
IC101
IC501 IC606
IC608 IC611 IC613
Q542 Q541 Q543 IC612 IC604
IC615
Q102
IC299 Q109 IC101
Q112 Q107 Q111 Q106 Q301 IC701
IC305 IC301 IC161
IC1012 IC1011
F CN103
F CN105

• This PCB is a six-layered board.


F CN102
CN511
IC903
IC1005
IC1003
Q1001
IC1002
IC1004
IC1010
IC1012
IC1011
IC301
IC701
IC802
IC803
IC804
IC909
IC907
IC1601
IC1602
IC1603
Q1251
Q1201
Q1311
Q1363
Q1411
Q1511
Q1531
Q1700
Q1701
Q1702
Q1703
CN1001
513

(VNP1749-C)

IC1012
IC1011

IC903
IC912

Q1001
IC1002
IC802

IC1003
IC803

IC917
IC1004
IC804

IC1005
Q1251
Q1201
Q1311
Q1531
IC909

Q1700
Q1701
Q1363
IC1602
Q1411
Q1511

Q1702
Q1703
IC1601
IC1603
IC907

IC1010

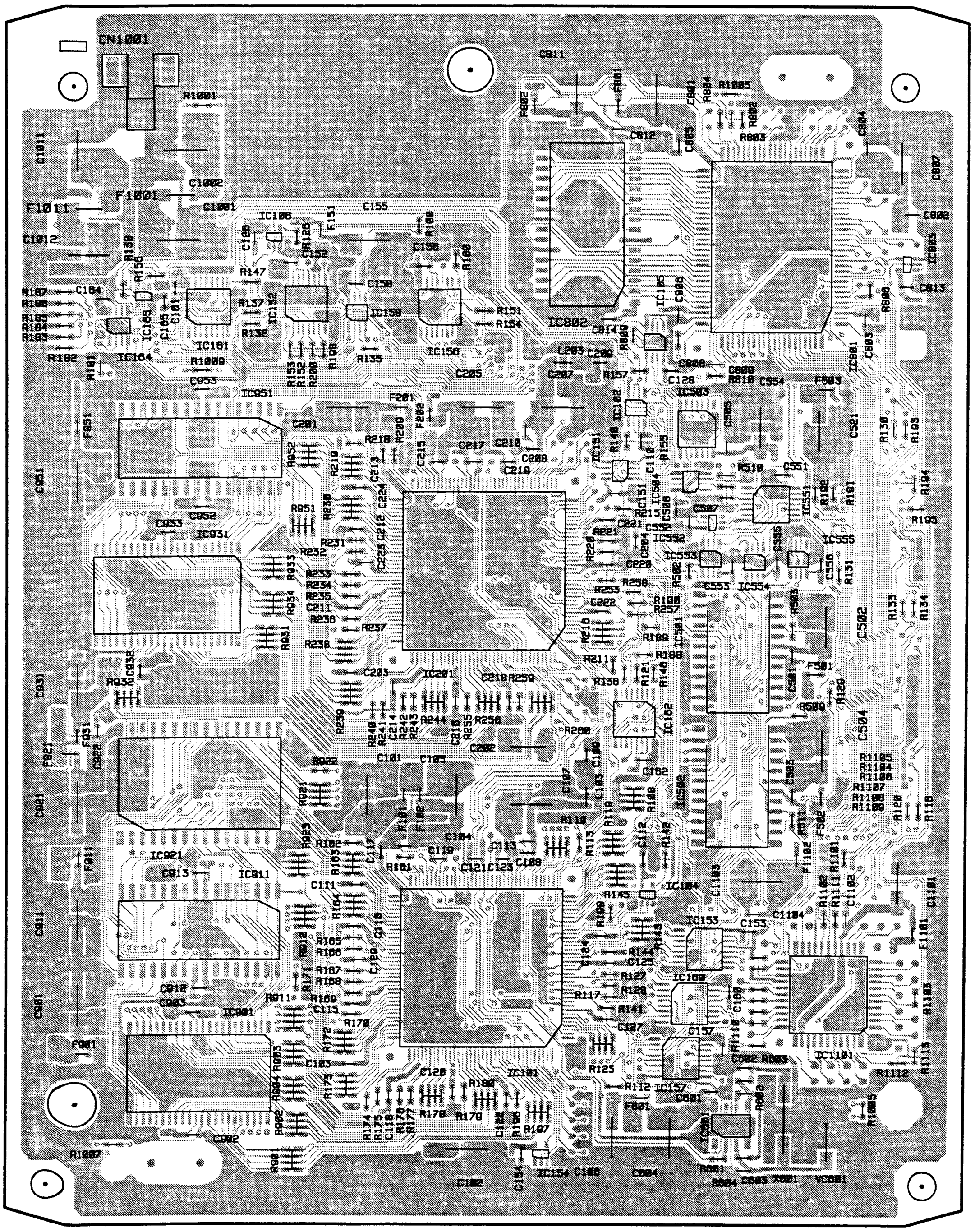
SIDE B

4.3 DSPB ASSY

A

• This PCB is a four-layered board.

F DSPB ASSY


CN1001
F1001
F1011
IC106
IC161
IC164
IC152
IC158
IC156
IC802
IC801
IC803
IC951
IC102
IC503
IC151
IC504
IC551
IC552
IC553
IC554
IC555
IC931
IC201
IC501
IC162
IC921
IC502
IC104
IC911
IC153
IC101
IC1101
IC160
IC901
IC157
IC601
IC154

B

C

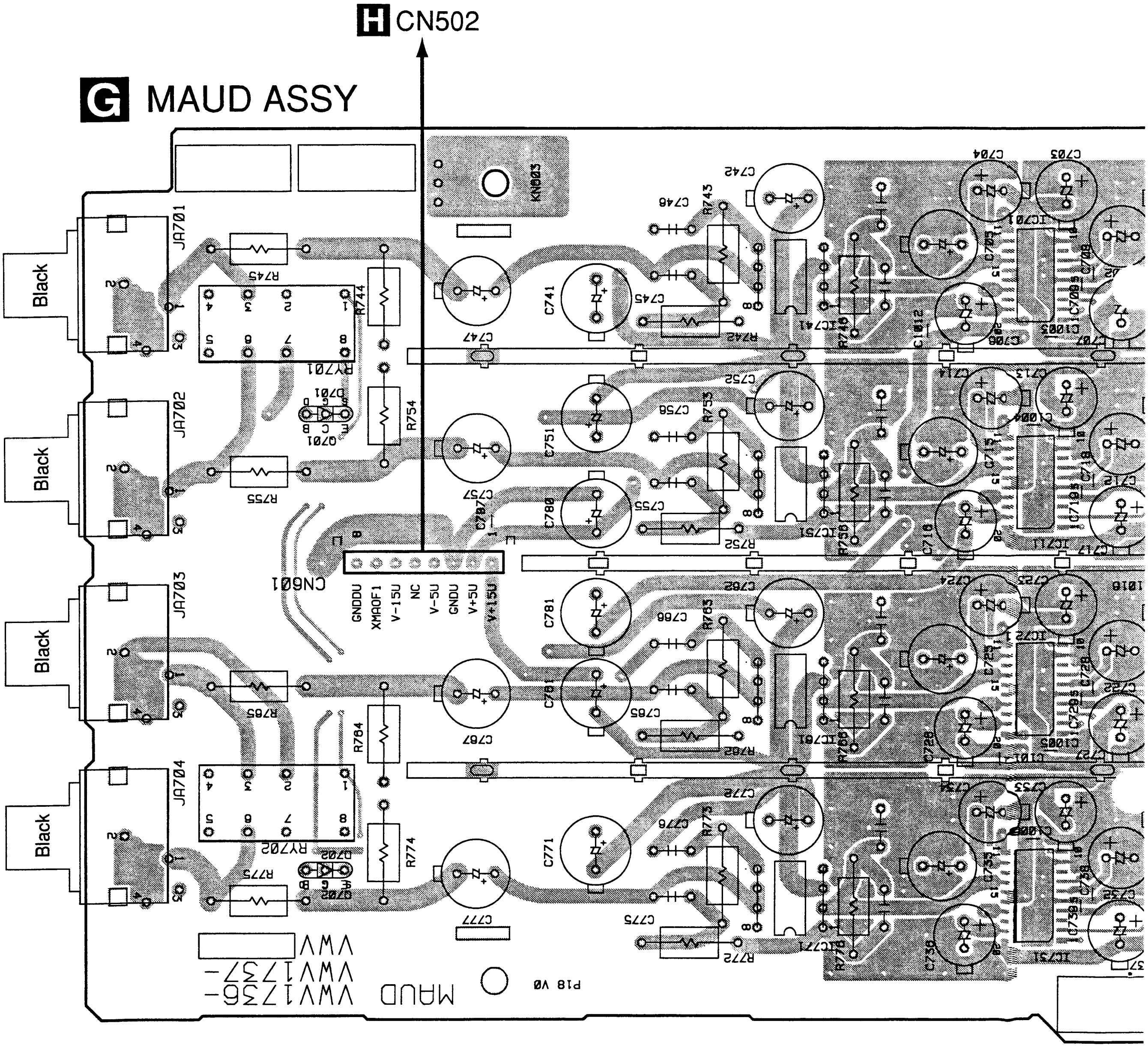
D

IC106 IC802 IC801
IC803
IC165 IC161 IC152 IC158
IC164 IC156 IC105
IC951 IC102 IC503
IC151 IC504 IC551
IC552
IC553 IC554 IC555
IC931 IC201
IC501
IC162
IC921 IC502
IC104
IC911 IC153
IC101
IC1101
IC160
IC901 IC157
IC601
IC154

(VNP1750-B)

SIDE A

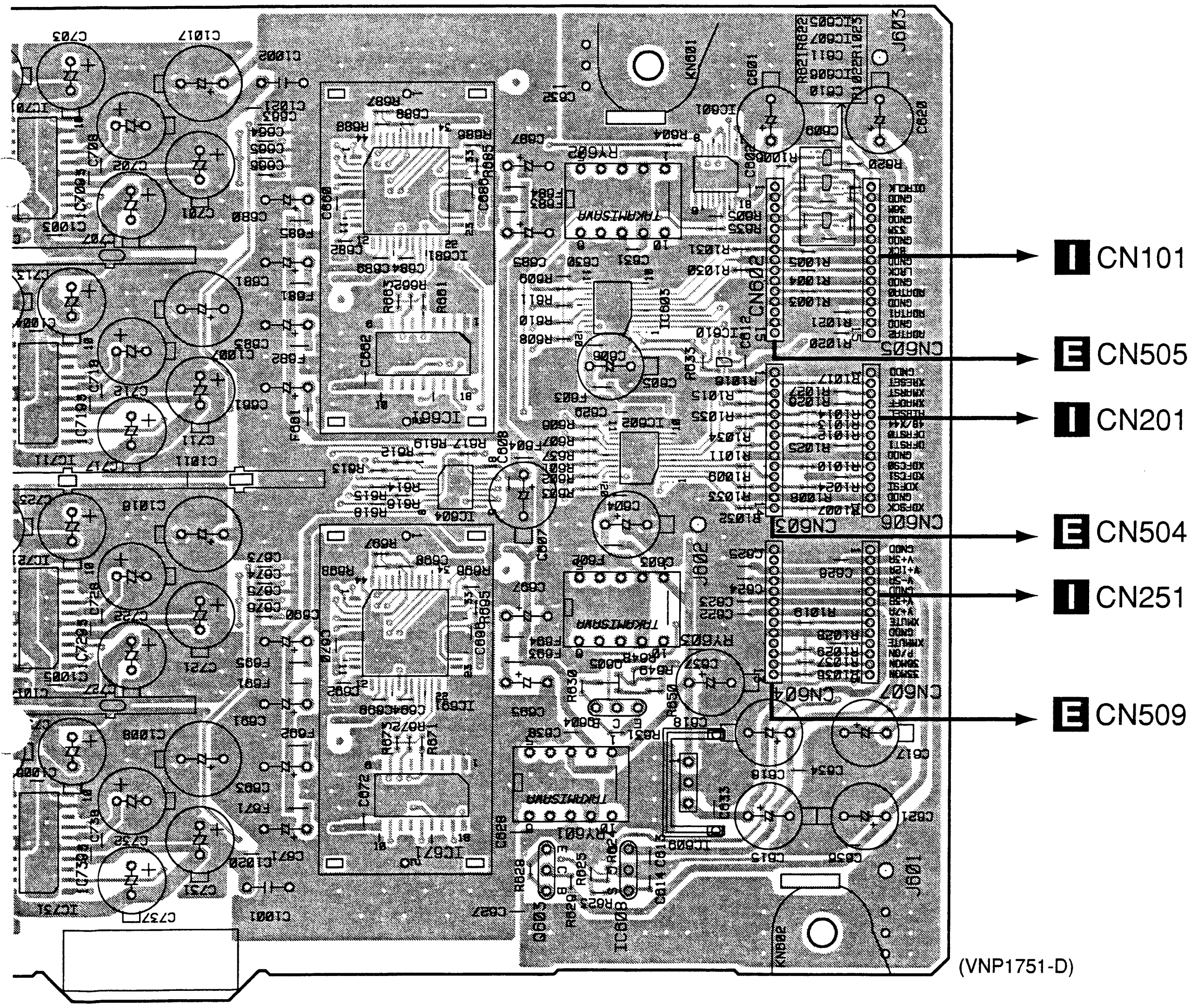
4.4 MAUD ASSY


H CN502
G MAUD ASSY
JA701
JA702
JA703
JA704
Black
Black
Black
Black
RY701
RY702
R745
R755
R765
R775
R744
R754
R764
R774
Q701
Q702
D701
D702
CN601
GNDDU
XMAOF1
V-15U
NC
V-5U
GNDU
V+5U
V+15U
KN003
C741
C742
C745
C746
C747
C751
C752
C755
C756
C757
C761
C762
C765
C766
C767
C771
C772
C775
C776
C777
C780
C781
C787
R742
R743
R746
R752
R753
R756
R762
R763
R766
R772
R773
R776
IC741
IC751
IC761
IC771
IC701
IC711
IC721
IC731
C1012
C703
C704
C705
C706
C707
C713
C714
C715
C716
C717
C720
C722
C723
C724
C725
C727
C733
C734
C735
C736
C739
C1003
C1004
C1005
MAUD VWV1736-
VWV1737-
VWV
P18 V0

Q701
Q702

IC741
IC751
IC761
IC771

IC701
IC711
IC721
IC731


I CN101
E CN505
I CN201
E CN504
I CN251
E CN509
(VNP1751-D)

:701
:711
:721
:731

Q113
IC201
IC702
IC703

Q114
IC614

Q101
Q103

IC352
IC251
IC965
IC5001
IC610

Q281
IC959
IC951

IC252
Q952
IC601
IC603

IC253
Q951

Q602

SIDE A

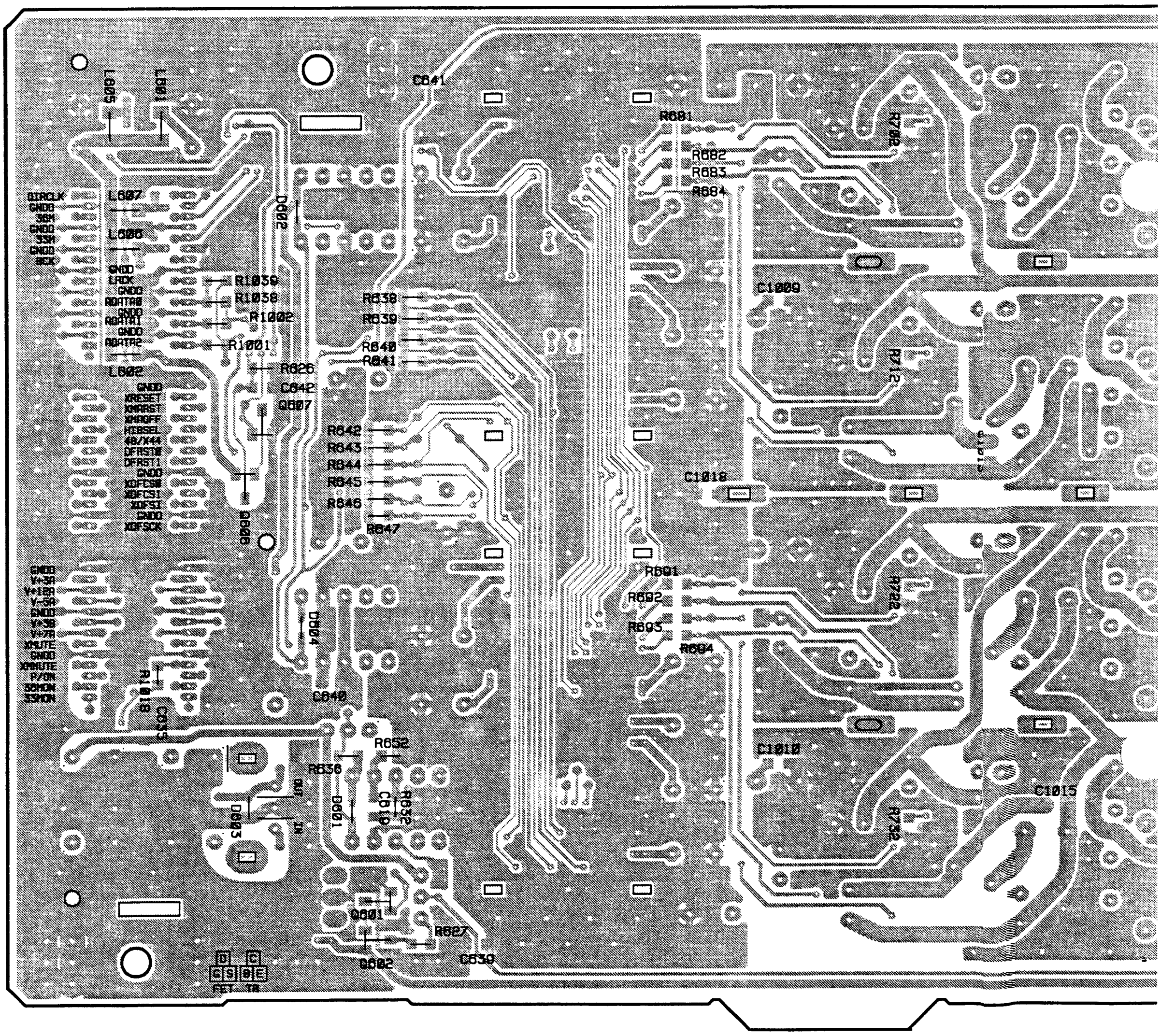
A

B

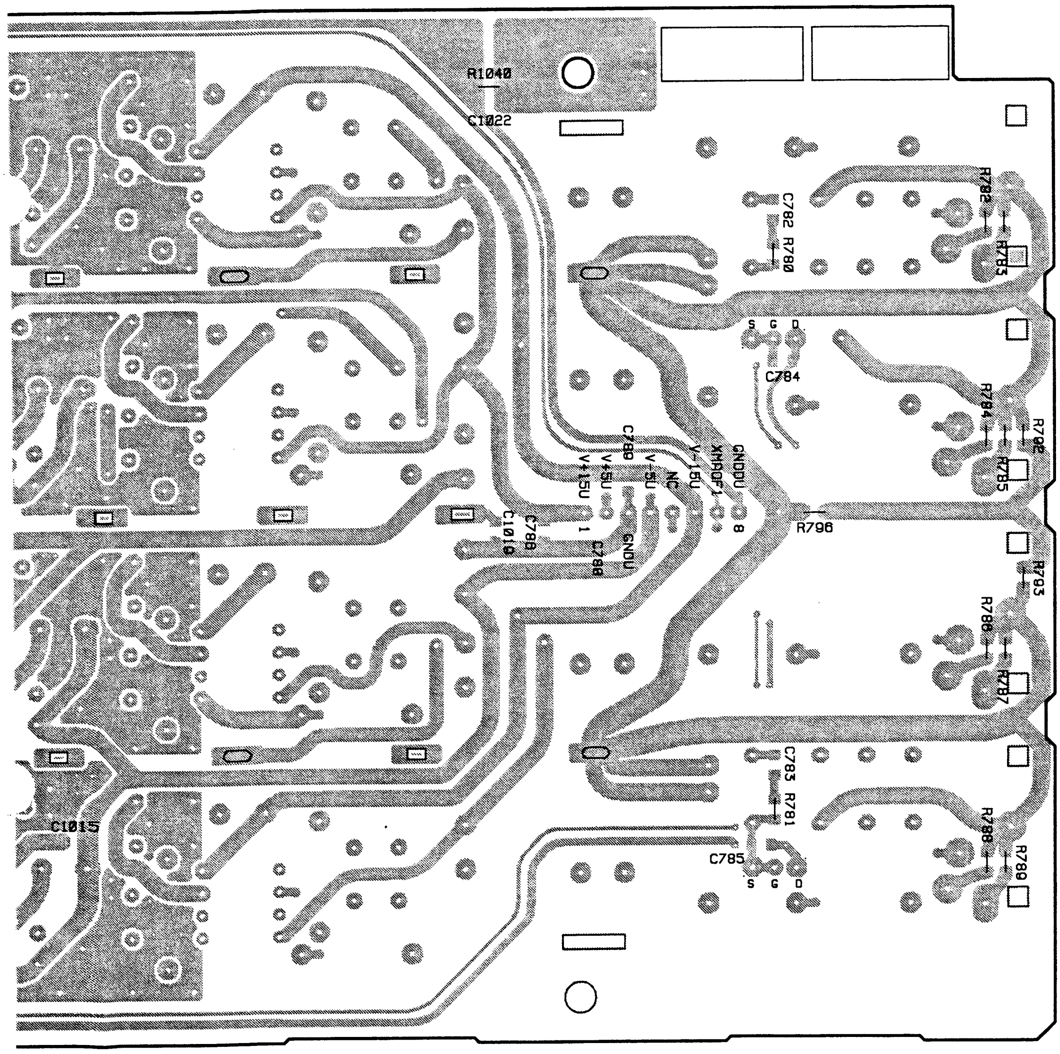
C

D

G MAUD ASSY


L605
L601
C641
R681
R682
R683
R684
R702
DIRCLK
GNDD
38M
GNDD
33M
GNDD
BCK
L607
L606
D602
GNDD
LRCK
GNDD
ADATA0
GNDD
ADATA1
GNDD
ADATA2
R1039
R1038
R1002
R1001
R638
R639
R640
R641
C1009
R712
L602
R626
C642
Q607
GNDD
XRESET
XMRRST
XMROFF
HIBSEL
48/X44
DFRST0
DFRST1
GNDD
XDFCS0
XDFCS1
XDFSI
GNDD
XDFSCK
R642
R643
R644
R645
R646
R647
C1018
Q606
GNDD
V+3A
V+10A
V-3A
GNDD
V+3B
V+7A
XMUTE
GNDD
XMMUTE
P/ON
30MON
33MON
R601
R602
R603
R604
R722
D604
R1018
C635
C640
R652
R636
C1010
C1015
R732
OUT
IN
D603
D601
C610
R632
Q601
R627
Q602
C639
D C
C S B E
FET TR

Q607 Q601
Q606 Q602

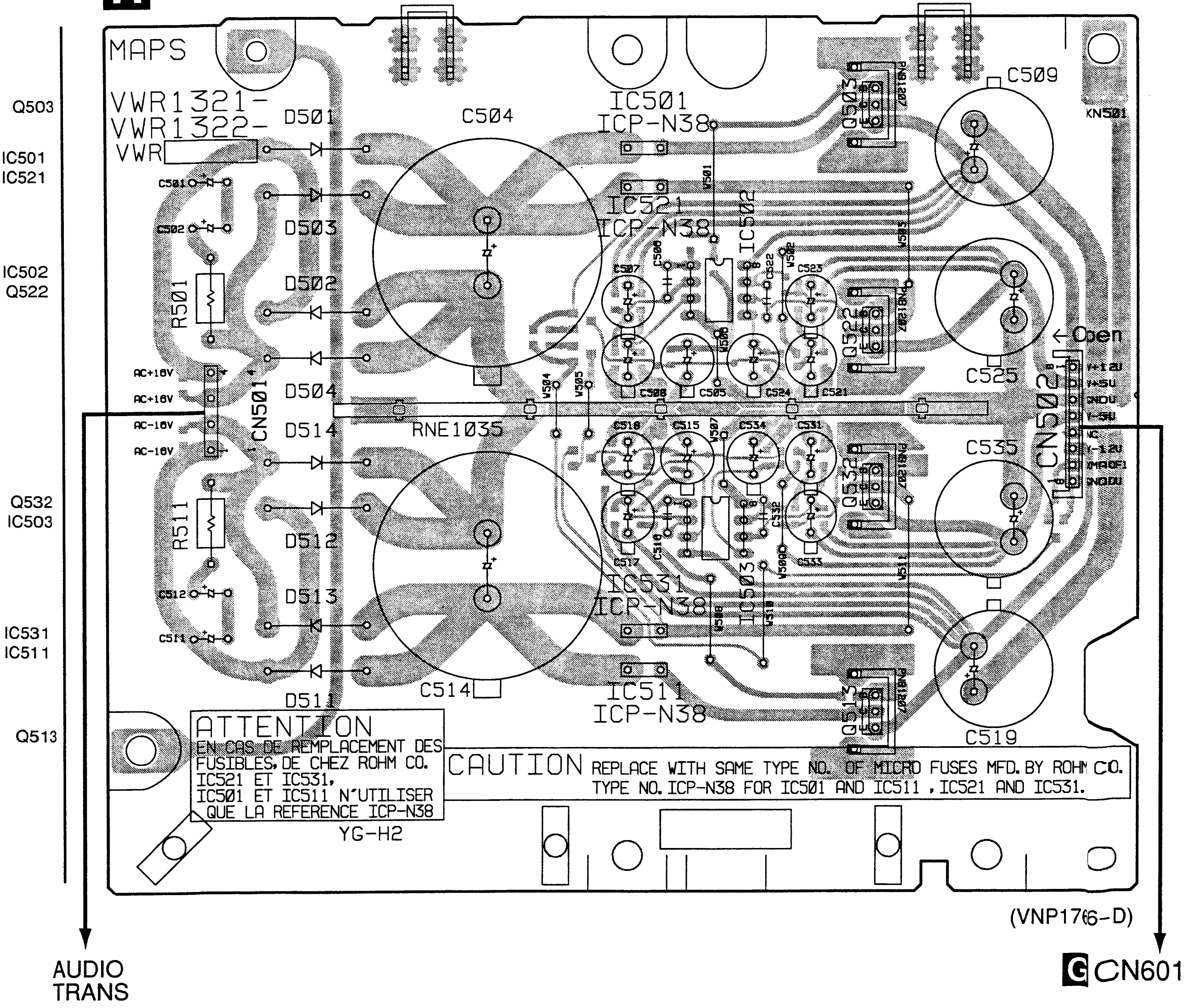

R1040
C1022
C782
R780
R782
R783
S G D
C784
R784
R792
R785
C789
GNDDV
XMPOF1
V-15V
NC
V-5V
V+5V
V+15V
8
1
R796
C780
C1010
GNDV
C788
R793
R786
R787
C783
R781
C785
S G D
R788
R789
C1015

(VNP1751-D)

SIDE B

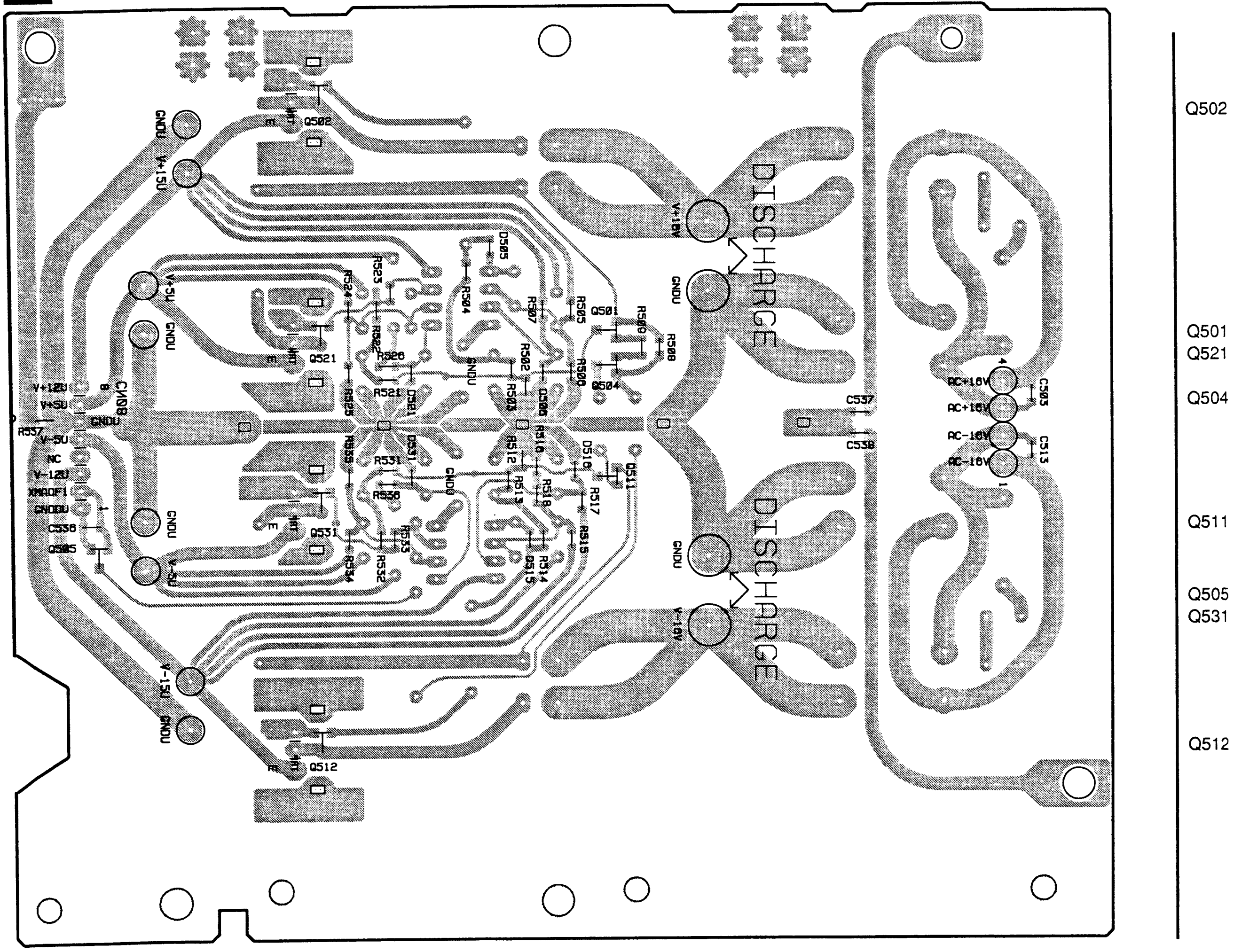
4.5 MAPS ASSY

H MAPS ASSY


Q503
IC501
IC521
IC502
Q522
Q532
IC503
IC531
IC511
Q513
MAPS
VWR1321-
VWR1322-
VWR
D501
D503
D502
D504
D514
D512
D513
D511
C501
C502
R501
R511
C512
C511
AC+16V
AC+16V
AC-16V
AC-16V
CN501
C504
C514
RNE1035
IC501
ICP-N38
IC521
ICP-N38
IC502
IC503
IC531
ICP-N38
IC511
ICP-N38
W501
W502
W503
W504
W505
W506
W507
W508
W509
W510
W511
C505
C506
C507
C508
C510
C515
C516
C517
C521
C522
C523
C524
C531
C532
C533
C534
Q503
Q523
Q532
Q513
C509
KN501
C525
C535
C519
← Open
CN502
V+12V
V+5V
GNDV
V-5V
NC
V-12V
MAOFF
GNDV
ATTENTION
EN CAS DE REMPLACEMENT DES FUSIBLES, DE CHEZ ROHM CO. IC521 ET IC531, IC501 ET IC511 N'UTILISER QUE LA REFERENCE ICP-N38
CAUTION REPLACE WITH SAME TYPE NO. OF MICRO FUSES MFD. BY ROHM CO. TYPE NO. ICP-N38 FOR IC501 AND IC511, IC521 AND IC531.
YG-H2
(VNP1766-D)
AUDIO TRANS
G CN601

SIDE A

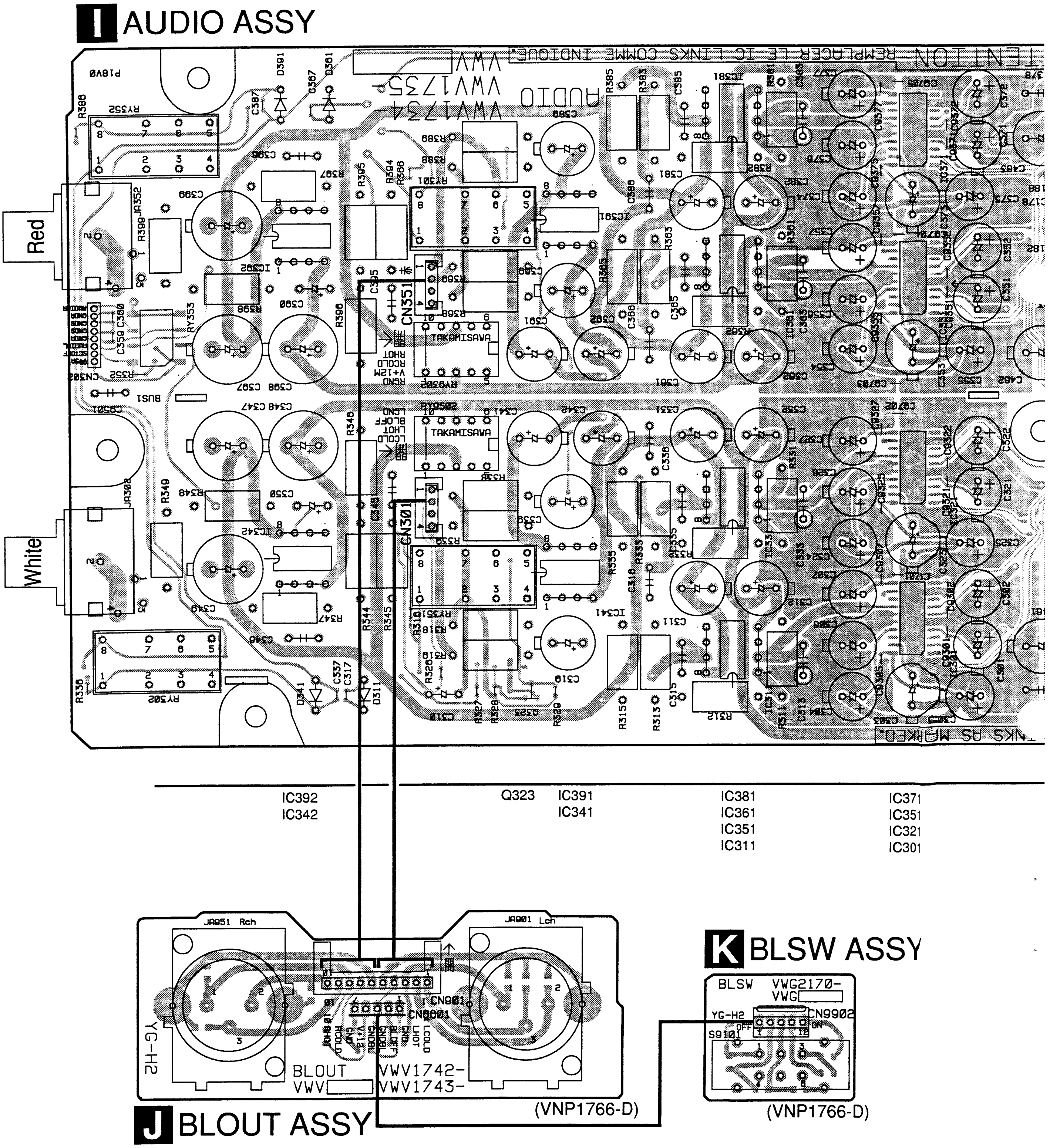
H MAPS ASSY

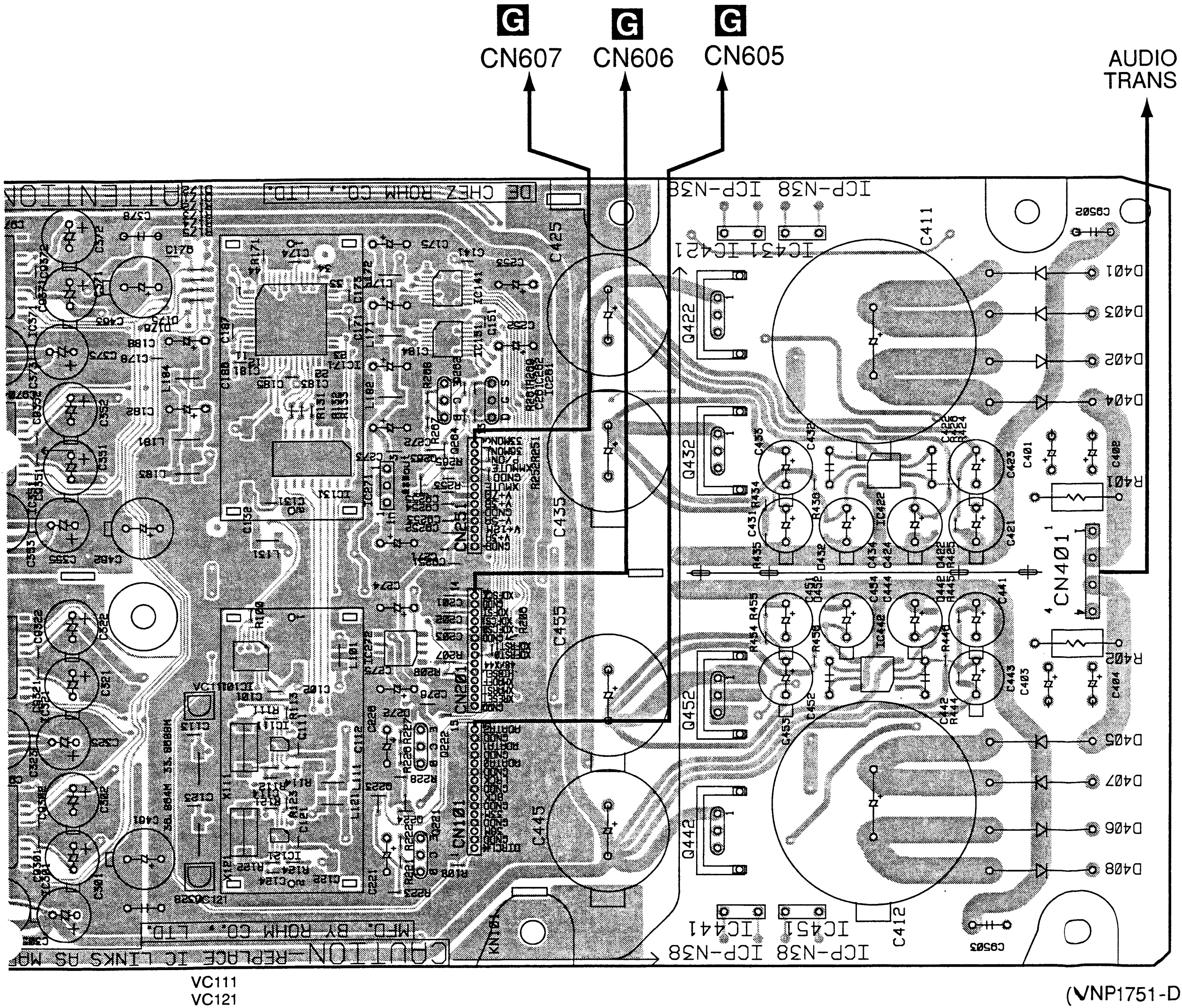

GNDV
V+15V
Q502
V+16V
GNDV
DISCHARGE
D505
R523
R524
R504
R507
R505
Q501
R509
R508
V-5V
GNDV
Q521
R522
R520
R502
R506
Q504
V+12V
V+5V
CN008
GNDV
R537
V-5V
NC
V-12V
XMAOFF
GNDDV
C536
Q505
R521
D501
R525
R503
D500
C537
C538
AC+16V
AC+16V
AC-16V
AC-16V
C503
C513
R535
D531
R531
R512
R510
D510
Q511
GNDD
R536
R513
R518
R517
R533
R515
Q531
R534
R532
D515
R514
V-16V
DISCHARGE
V-15V
GNDV
Q512
Q502
Q501
Q521
Q504
Q511
Q505
Q531
Q512

(VNP1766-D)

SIDE B

4.6 AUDIO, BLOUT and BLSW ASSYS


I AUDIO ASSY
AUDIO
VWV1734-
VWV1735-
VWV
Red
White
JA352
JA302
RY352
RY302
RY353
RY301
RY351
RY302
RY502
CN351
CN301
CN302
TAKAMISAWA
RHOT
RCOLD
V+12M
RGND
LGND
BLOFF
LHOT
LCOLD
BUS1
IC392
IC342
IC391
IC341
IC381
IC361
IC351
IC311
C389
C399
C398
C397
C347
C348
C349
C350
C346
R390
R398
R396
R346
R340
R348
R347
R344
R345
D391
D381
D341
D311
Q323
IC392
IC342
Q323 IC391
IC341
IC381
IC361
IC351
IC311
IC371
IC351
IC321
IC301
J BLOUT ASSY
JA951 Rch
JA901 Lch
CN901
CN9001
YG-H2
RHOT
RCOLD
GND
V+12
GNDB
BLOFF
LHOT
LCOLD
BLOUT
VWV
VWV1742-
VWV1743-
(VNP1766-D)
K BLSW ASSY
BLSW VWG2170-
VWG
YG-H2
CN9902
S9101
OFF
ON
(VNP1766-D)


G
CN607
G
CN606
G
CN605
AUDIO TRANS
CN401
C411
C412
C425
C435
C445
C455
D401
D402
D403
D404
D405
D406
D407
D408
R401
R402
Q422
Q432
Q442
Q452
IC421
IC431
IC441
IC451
ICP-N38
CN101
CN201
CN251
KN101
MFD. BY ROHM CO., LTD.
CAUTION-REPLACE IC LINKS AS
VC111
VC121

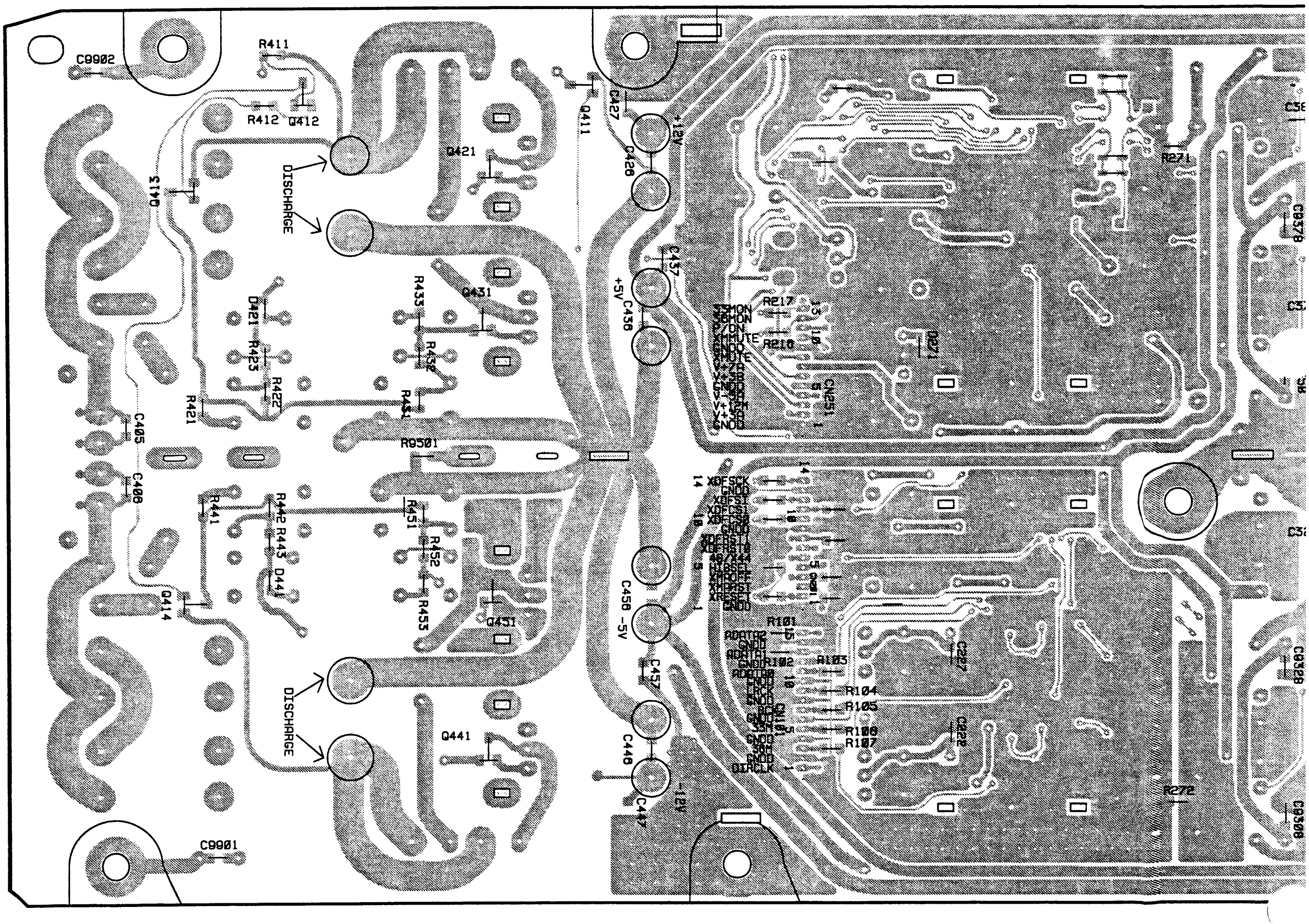
(VNP1751-D)

1	IC101	IC171	IC271	IC141	IC261	IC421	IC431	IC422
1		IC131	IC272	IC151		Q422	IC451	IC442
1		IC111	Q223	Q262		Q432		
1		IC121	Q224	Q264		Q452		
			Q221	Q263		Q442		
				Q222		IC441		

SIDE A

A

I AUDIO ASSY


C9902
R411
R412
Q412
Q413
DISCHARGE
Q421
Q411
C427
+12V
C428
C437
+5V
C438
R433
Q431
R432
R434
D421
R423
R422
R421
C405
R9501
C408
R441
R442
R443
D441
R451
R452
R453
Q414
Q451
C458
-5V
C457
C448
-12V
C447
Q441
C9901
33MON
36MON
P/ON
XMMUTE
GNDD
XMUTE
V+7A
V+3B
GNDD
V-9A
V+12M
V+3A
GNDD
R217
R218
CN251
XDFSCK
GNDD
XDFSI
XDFCS1
XDFCS0
GNDD
XDFRST1
XDFRST0
40/X44
HIBSEL
XMPOFF
XMPRST
XRESET
GNDD
CN301
R101
ADATA2
GNDD
ADATA1
GNDD
R102
ADATA0
GNDD
LRCK
GNDD
BCK
GNDD
33M
GNDD
36M
GNDD
DIRCLK
CN101
R103
R104
R105
R106
R107
Q271
C227
C228
R271
R272
C3378
C3308

B

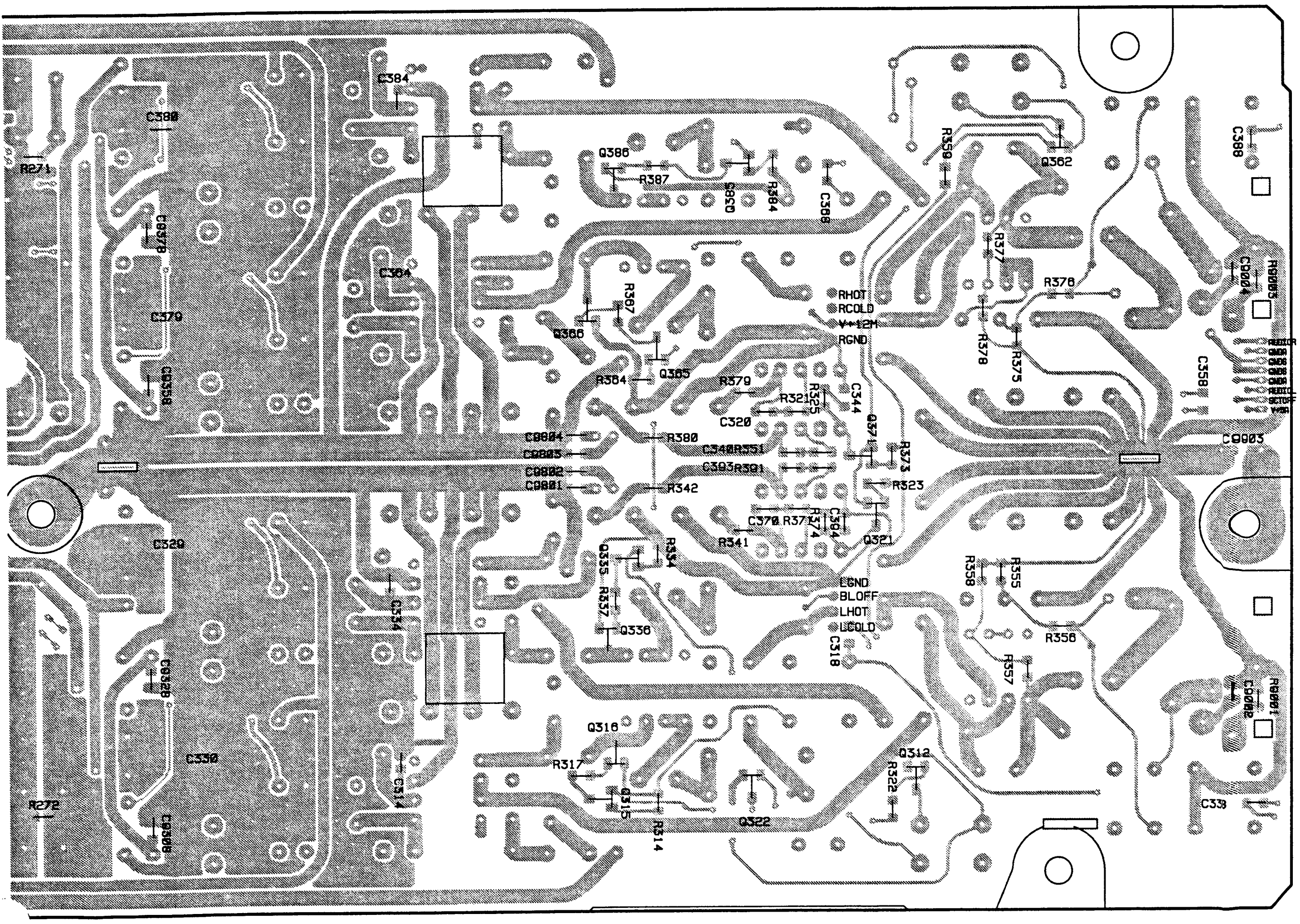
C

Q413
Q414

Q421
Q431
Q451
Q441

D

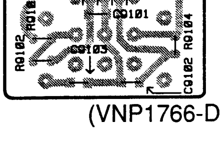
SIDE B


C384
C380
R271
C378
C379
C350
C364
Q386
R387
Q365
R384
C308
R359
Q362
C388
R377
R376
C9004
R9003
RHOT
RCOLD
V+12M
RGND
R378
R375
C358
R397
Q366
Q385
R364
R379
R321
R325
C344
C320
Q371
R373
C9804
C9803
C9802
C9801
R380
C340
R351
C393
R391
R323
C9903
R342
C370
R371
R374
C304
Q321
R341
Q335
R334
R358
R355
C320
C334
R357
Q336
LGND
BLOFF
LHOT
LCOLD
C318
R356
R357
C9380
C9002
R9001
Q316
C330
R317
Q312
R322
C314
R272
C9300
Q315
R314
Q322
C33

(VNP1751-D)

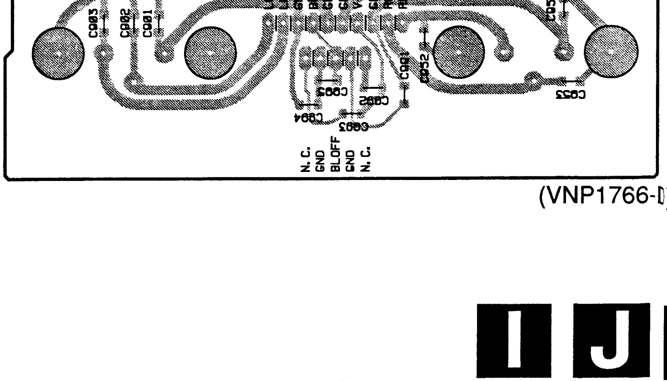
Q386	Q365	Q385	Q371	Q362
Q366		Q322	Q321	
Q335			Q312	
Q336				
Q316				
Q315				

K BLSW ASSY


BALANCE ON
N.C.
GND
BLOFF
GND
N.C.
R9103
R9101
C9101
R9104
R9102
C9103
R9102
C9102

(VNP1766-D)

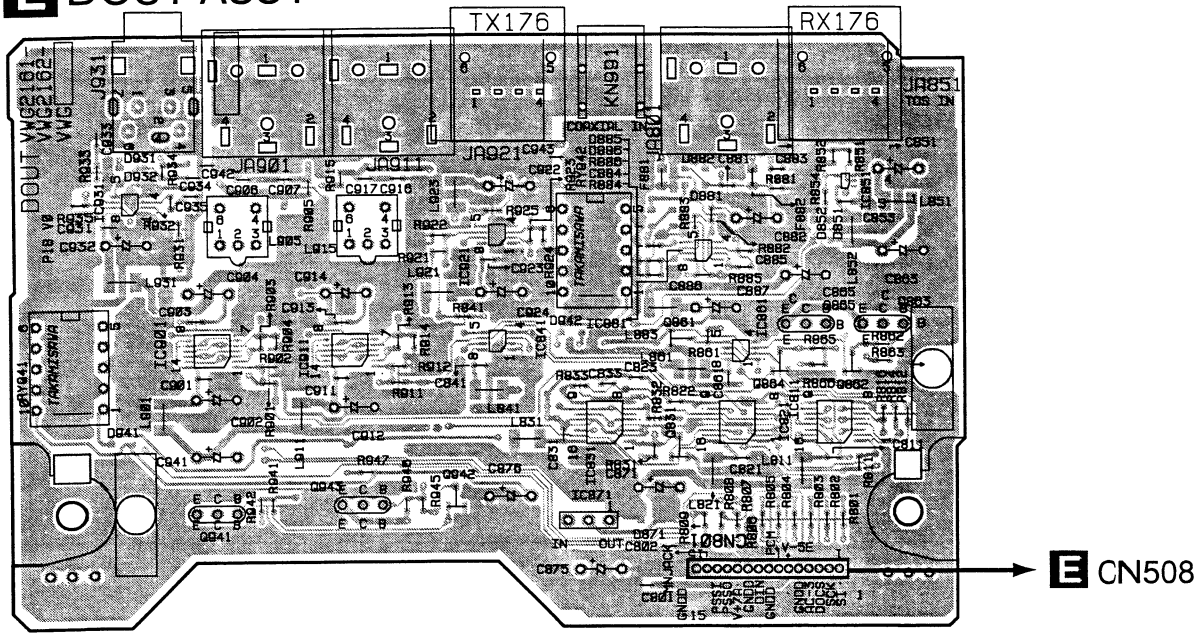
J BLOUT ASSY


C803
C802
C801
LCOLD
LHOT
GND
BLOFF
GNDBL
GNDBL
V+12
GND
RCOLD
RHOT
C851
C901
C852
C853
C803
C804
C802
C893
C853
N.C.
GND
BLOFF
GND
N.C.

(VNP1766-D)

4.7 DOUT ASSY

L DOUT ASSY

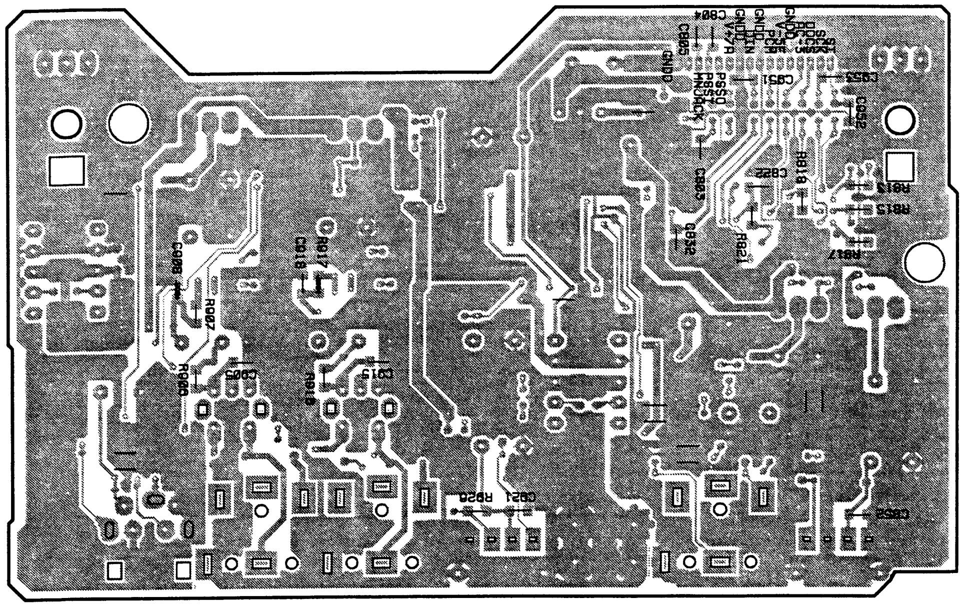

TX176
RX176
DOUT VWG2161 VWG2162 VWG
JA901
JA911
JA921
JA851
KN901
TOS IN
COAXIAL IN
TAKAMISAWA
CN801
E CN508

(VNP1751-D)

IC931
IC901 Q941
IC911 Q943
Q942
IC921 IC841
IC831 IC871
Q861 Q831
IC881 IC861 IC821
Q865 Q864
IC851 Q863 Q862 IC811

SIDE A

L DOUT ASSY

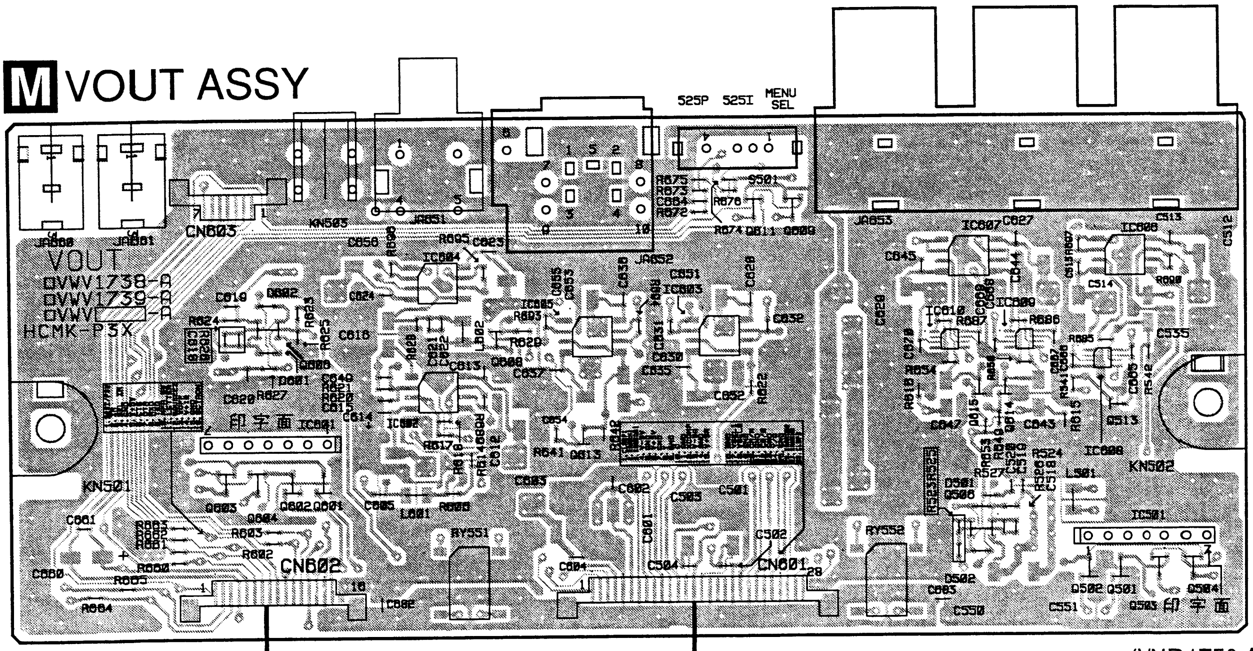


(VNP1751-D)

SIDE B

4.8 VOUT ASSY

M VOUT ASSY


525P
525I
MENU SEL
JA800
JA801
CN603
KN503
JA851
JA852
JA853
VOUT
DVWV1738-A
DVWV1739-A
HCMK-P3X
S501
IC607
IC606
IC604
IC605
IC603
IC610
IC609
IC601
IC602
IC608
IC501
KN501
KN502
CN602
CN601
RY551
RY552
L501
L601
1
10
28

(VNP1752-A)

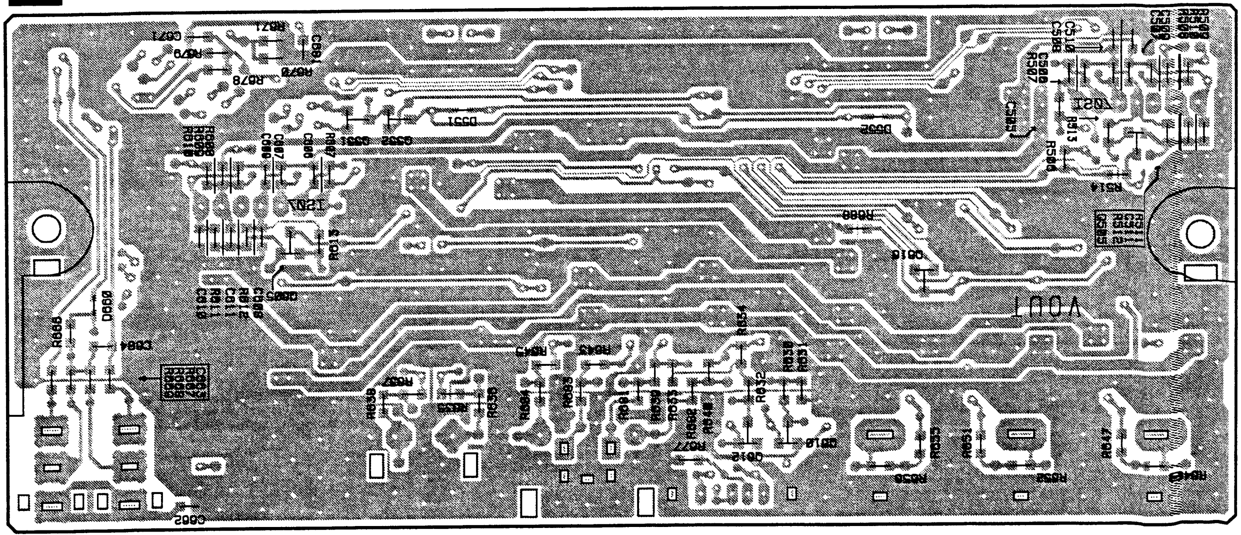
Q603 IC601 IC831 IC604 Q608 IC605 IC603 Q611 IC607 IC609 Q502 IC606 Q503
Q604 Q602 IC871 IC602 Q613 Q609 IC610 Q614 Q501 IC608 Q504
Q601 Q615 Q513
Q506 IC501

E CN507

E CN506

SIDE A

M VOUT ASSY

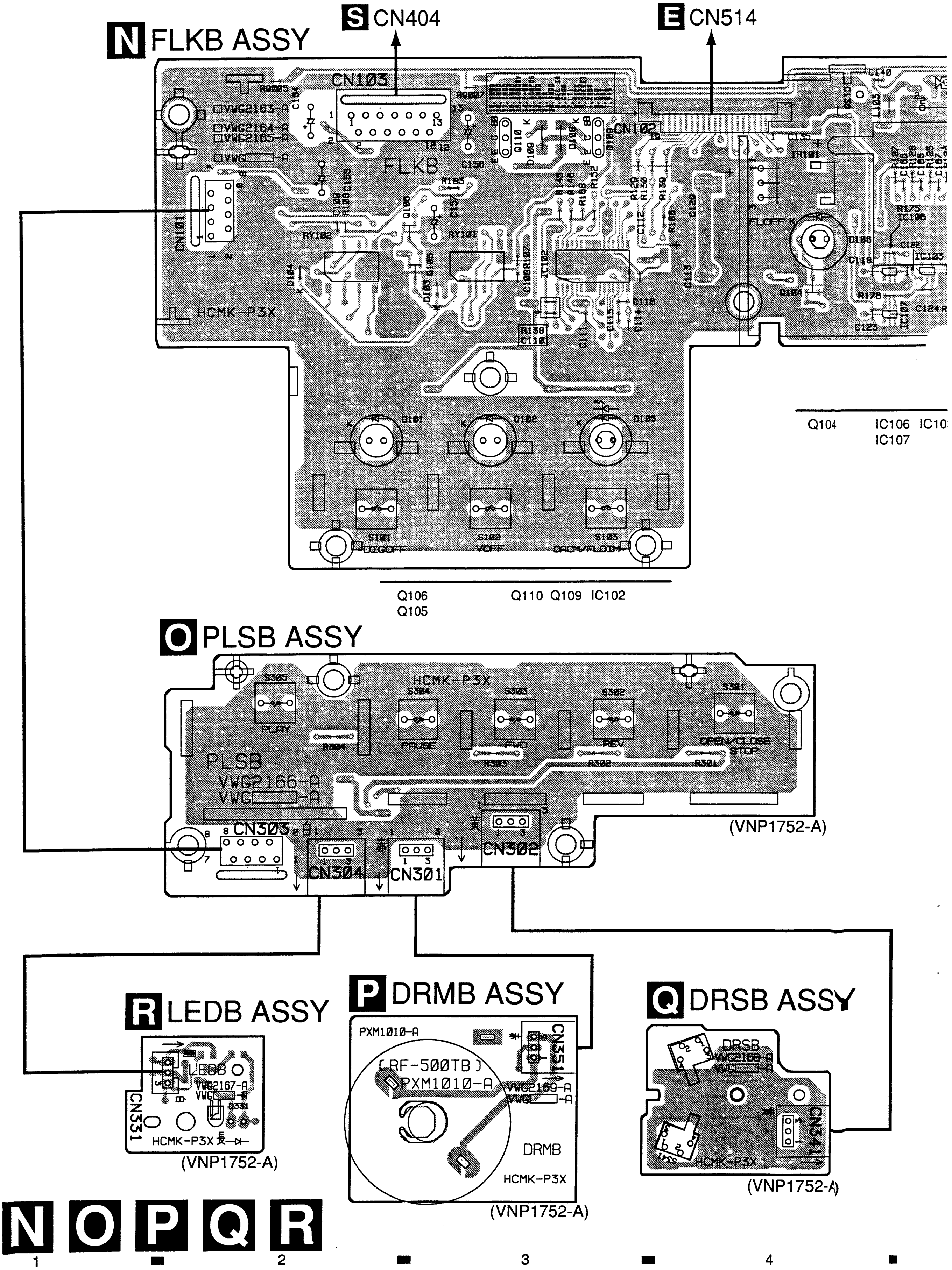


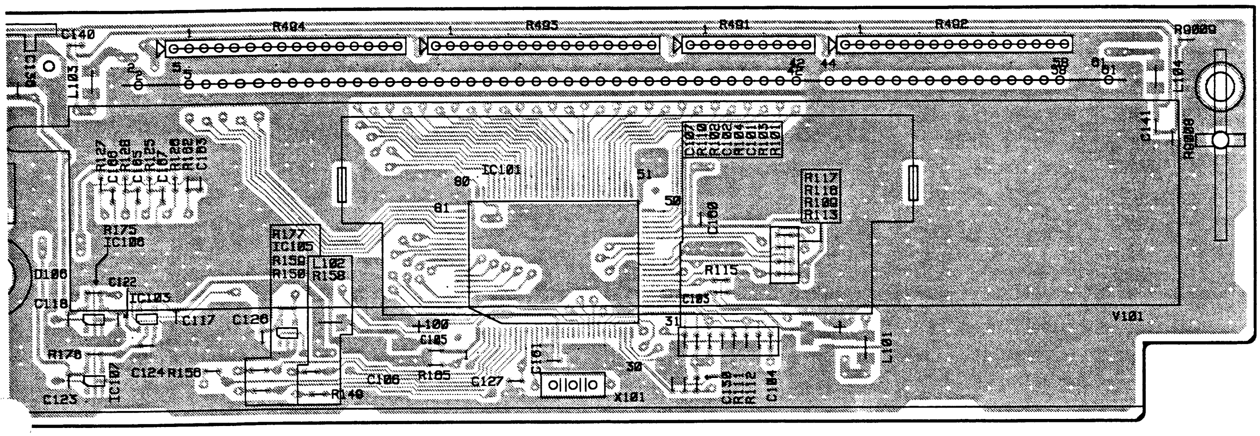
(VNP1 752-A)

Q605 Q551 Q552 Q612 Q610 Q616 Q505

SIDE B

4.9 FLKB, PLSB, DRMB, DRSB and LEDB ASSYS


S CN404
E CN514
N FLKB ASSY
CN103
CN101
CN102
FLKB
VWG2163-A
VWG2164-A
VWG2165-A
VWG -A
HCMK-P3X
RY102
RY101
IC102
IR101
FLOFF
D101
D102
D105
D106
S101 DIGOFF
S102 VOFF
S103 DACM/FLDIM
Q104
IC106 IC10
IC107
Q106
Q105
Q110 Q109 IC102
O PLSB ASSY
PLSB
VWG2166-A
VWG -A
HCMK-P3X
S305 PLAY
S304 PAUSE
S303 FWD
S302 REV
S301 OPEN/CLOSE STOP
CN303
CN304
CN301
CN302
(VNP1752-A)
R LEDB ASSY
LEDB
VWG2167-A
CN331
HCMK-P3X
(VNP1752-A)
P DRMB ASSY
PXM1010-A
[RF-500TB]
PXM1010-A
VWG2169-A
VWG -A
CN351
DRMB
HCMK-P3X
(VNP1752-A)
Q DRSB ASSY
DRSB
VWG2168-A
VWG -A
CN341
HCMK-P3X
(VNP1752-A)


C140
R404
R403
R401
R402
R0000
C139
L103
L104
C141
R0000
R127
C106
R128
C105
R125
C107
R120
R102
C103
IC101
80
81
51
50
D107
R110
R102
C102
R104
C101
R103
R101
R117
R116
R100
R113
C108
R115
C103
R175
IC106
D106
C122
IC103
C118
C117
C126
R177
IC105
R159
R150
L102
R158
R178
C124
R156
IC107
C123
C105
C106
R105
C127
R140
X101
30
31
C130
R111
R112
C104
L101
V101

(VNP1752-A)

4	IC106 IC107	IC103	IC105	IC101

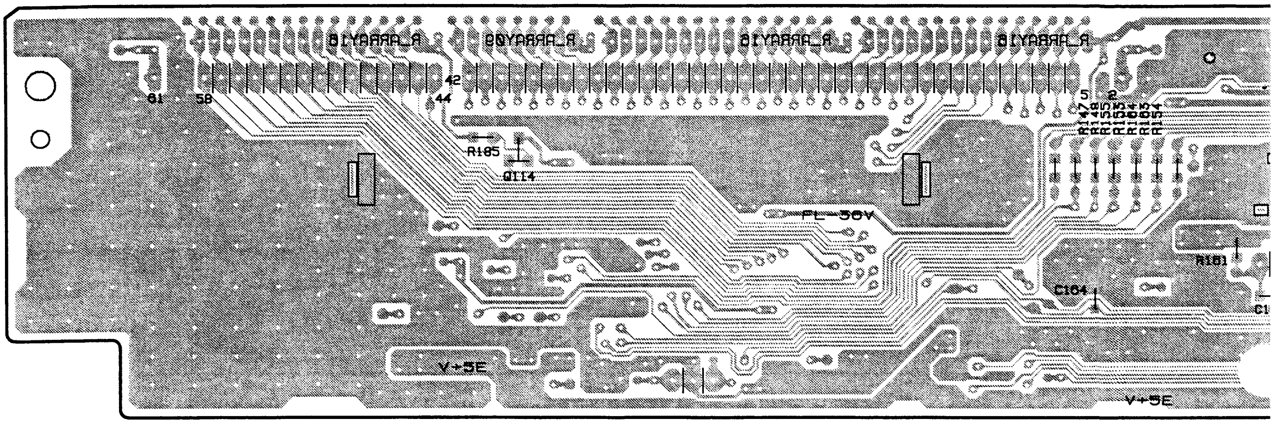
SY

A)

SIDE A

A

N FLKB ASSY


R_ARRAY16
R_ARRAY09
R_ARRAY16
R_ARRAY16
61
58
42
44
5
R185
Q114
FL-36V
R147
R148
R155
R153
R164
R165
R154
R161
C164
C1
V+5E
V+5E

Q114

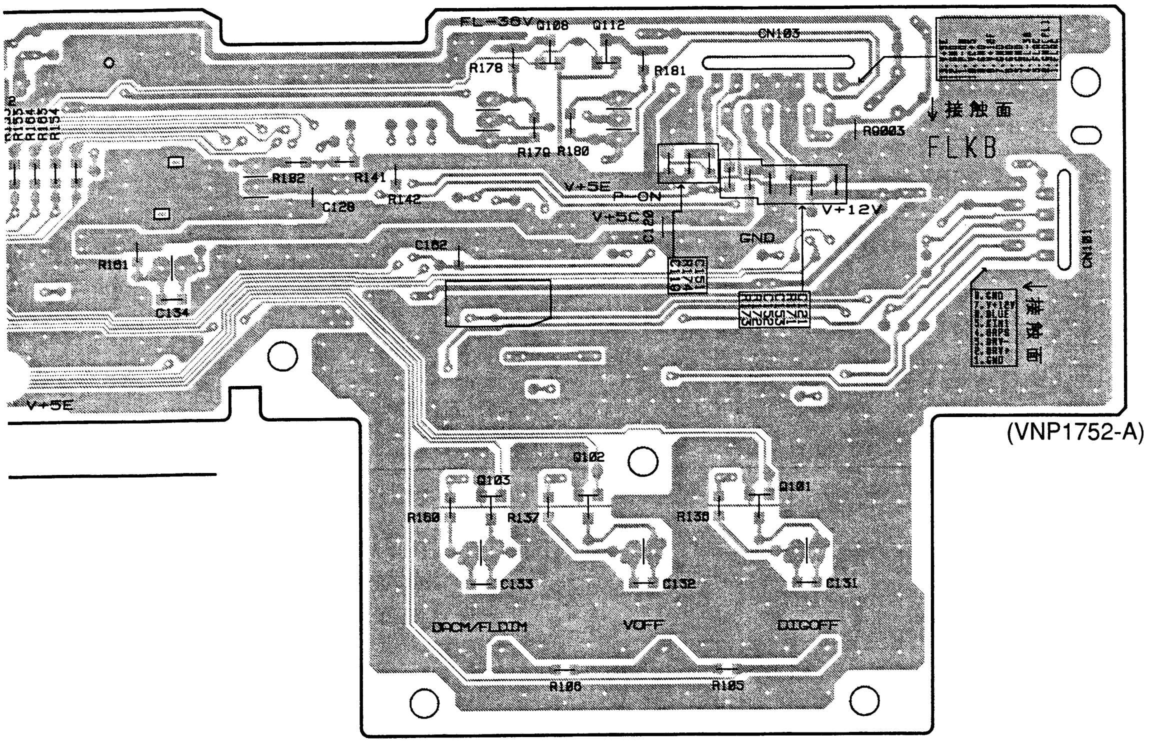
B

C

D

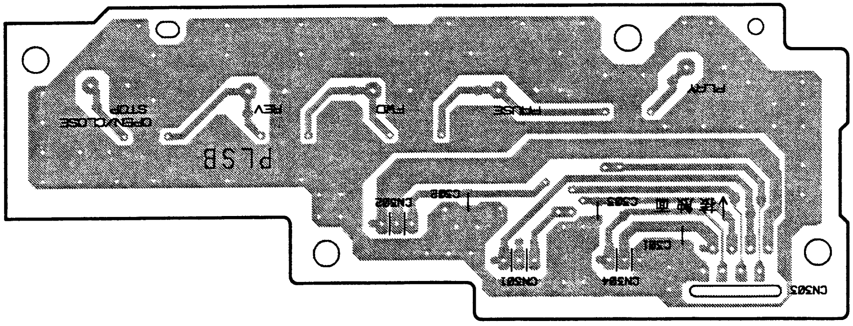
SIDE B

SIDE B


FL-38V
Q108
Q112
CN103
R178
R181
R170
R180
R0003
FLKB
R182
R141
R142
C120
V+5E
P-ON
V+5C
V+12V
GND
C102
R101
C134
CN101
Q102
Q103
Q101
R160
R137
R130
C133
C132
C131
DACM/FLDIM
VOFF
DIGOFF
R106
R105
Q103 Q108 Q112 Q101
Q102

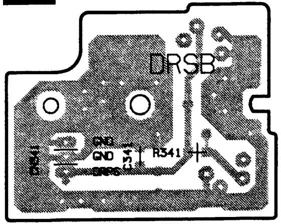
(VNP1752-A)

O PLSB ASSY


STOP
OPEN/CLOSE
REV
FWD
PAUSE
PLAY
PLSB
CN302
CN301
CN304
CN302

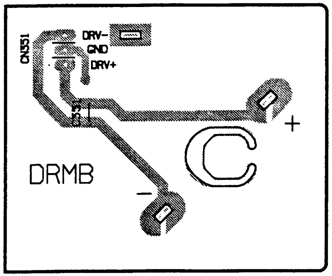
(VNP1752-A)

Q DRSB ASSY


DRSB
CN341
GND
GND
DRP6
C341
R341

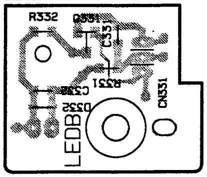
(VNP1752-A)

P DRMB ASSY


CN351
DRV-
GND
DRV+
C351
DRMB
+
−

(VNP1752-A)

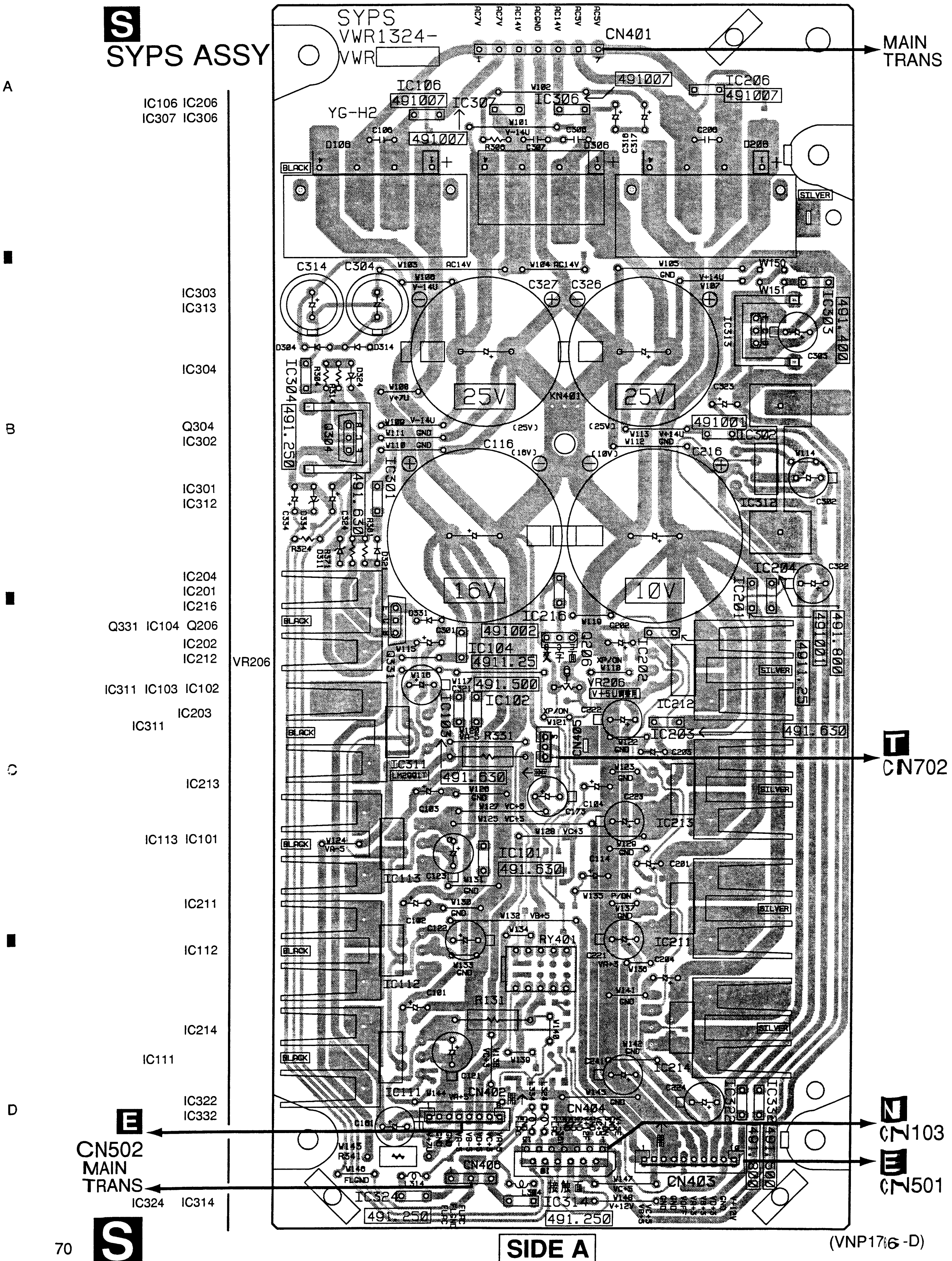
R LEDB ASSY


R332
Q331
C331
R331
D332
CN331
LEDB

(VNP1752-A)

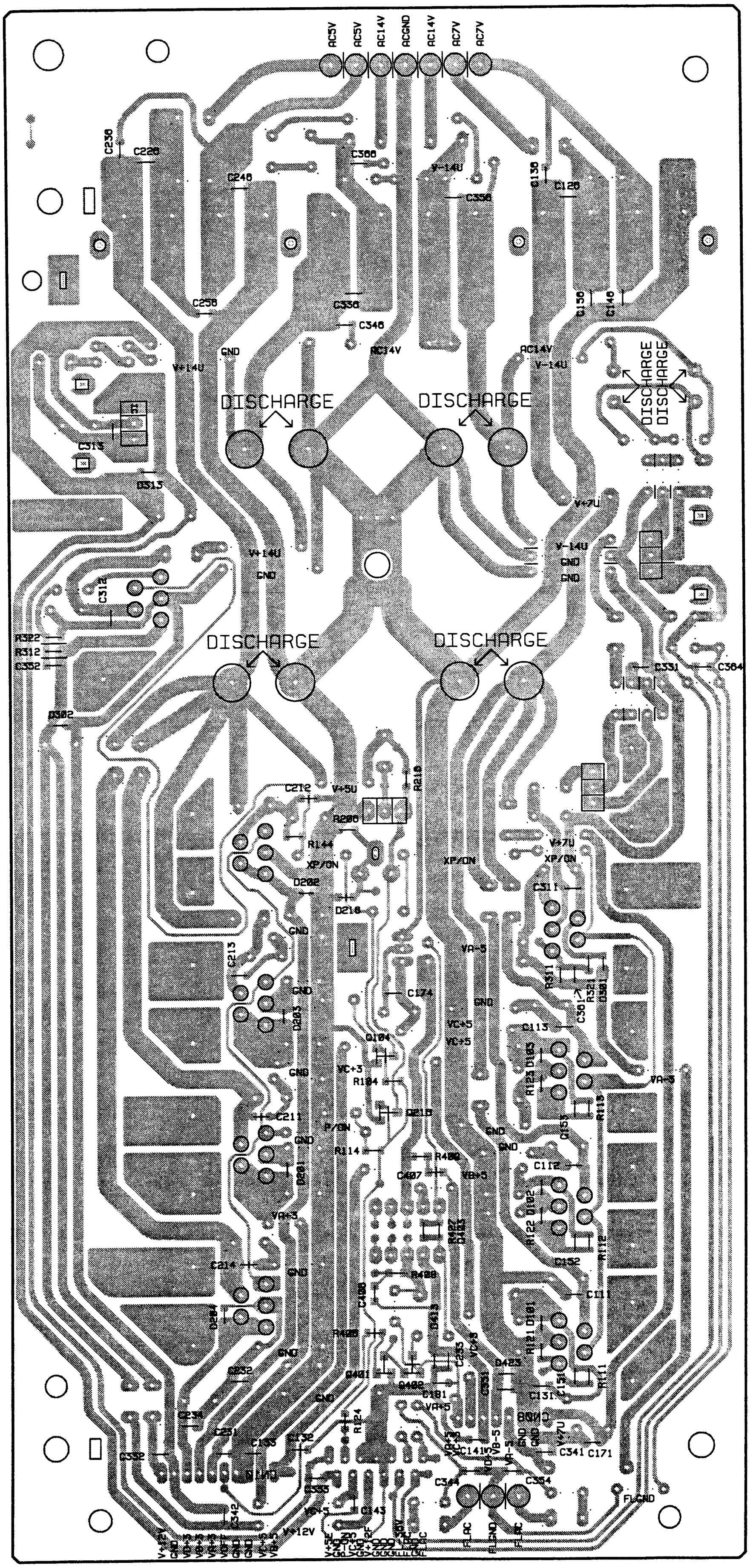
4.10 SYPS ASSY

S
SYPS ASSY


A
B
C
D
IC106 IC206
IC307 IC306
IC303
IC313
IC304
Q304
IC302
IC301
IC312
IC204
IC201
IC216
Q331 IC104 Q206
IC202
IC212
VR206
IC311 IC103 IC102
IC203
IC311
IC213
IC113 IC101
IC211
IC112
IC214
IC111
IC322
IC332
IC324 IC314
SYPS
VWR1324-
VWR
CN401
AC7V
AC7V
AC14V
ACGND
AC14V
AC5V
AC5V
MAIN
TRANS
491007
YG-H2
D100
D306
D200
BLACK
SILVER
C314
C304
C327
C326
25V
25V
KN401
C116
C216
16V
10V
IC502
491.400
491.250
491.630
491002
4911.25
491.500
491.800
491.630
LM2001T
R351
R131
RY401
CN402
CN404
CN403
CN406
VR206
V+5U
FLGND
CN702
T
E
CN502
MAIN
TRANS
N
CN103
E
CN501

SIDE A

S SYPS ASSY


AC5V
AC5V
AC14V
ACGND
AC14V
AC7V
AC7V
C230
C220
C240
C300
V-14U
C350
C130
C120
C250
C330
C340
C150
C140
GND
AC14V
AC14V
V+14U
V-14U
DISCHARGE
DISCHARGE
DISCHARGE
DISCHARGE
DISCHARGE
DISCHARGE
C313
D313
V+7U
V-14U
GND
GND
V+14U
GND
C312
R322
R312
C332
D302
C331
C304
C212
V+5U
R210
R200
R144
XP/ON
D202
D216
XP/ON
V+7U
XP/ON
C311
GND
C213
C174
VA-5
R311
R321
D301
C301
GND
D203
VC+5
VC+5
C113
GND
Q104
VC+3
R104
D105
R123
R113
VA-5
C211
P/ON
D215
GND
GND
C155
GND
R114
R400
C407
VB+5
C112
D201
D102
R122
R112
VA+3
C152
C214
GND
R408
C406
C111
D204
D413
R403
D101
R121
GND
C285
VC+5
D403
C151
R111
C232
Q401
R402
D181
C501
C131
VA+5
GND
C234
R124
C231
C133
C132
C333
C143
C342
VB+5
V+12V
C341
C171
C344
C354
V+7U
FLGND
FL AC
FLGND
FL AC

Q218

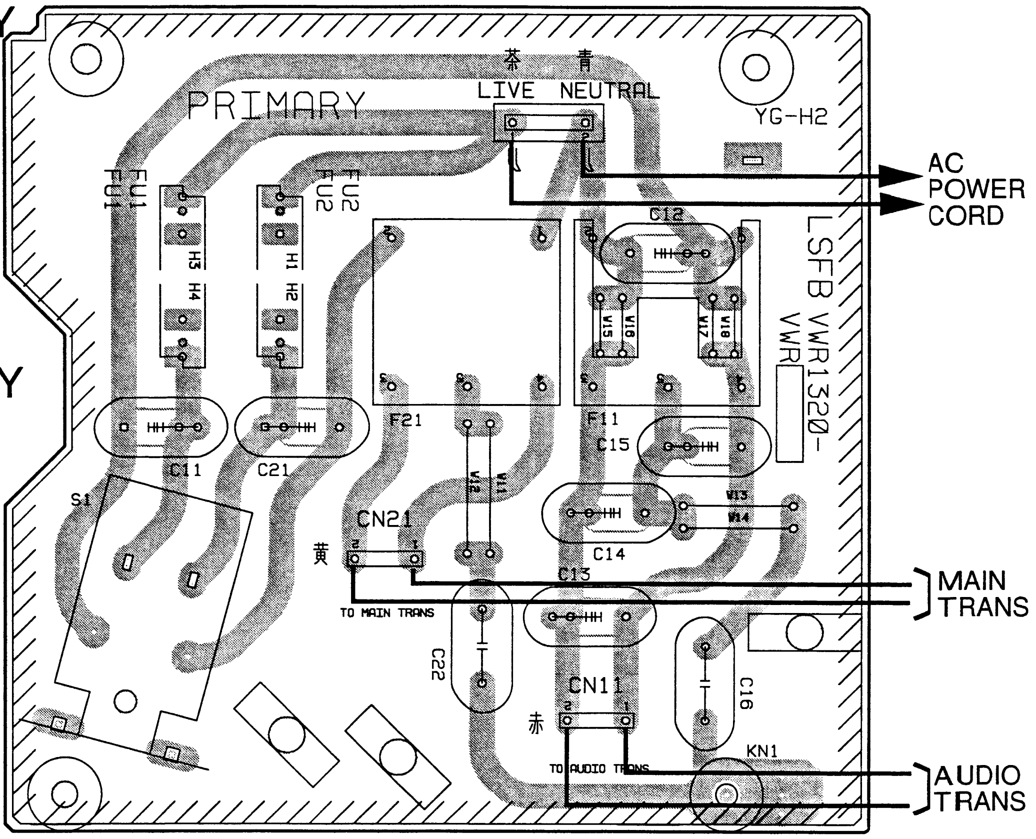
Q401 Q402

(VNP1766-D)

SIDE B

4.11 FANB and LSFB ASSYS

U LSFB ASSY

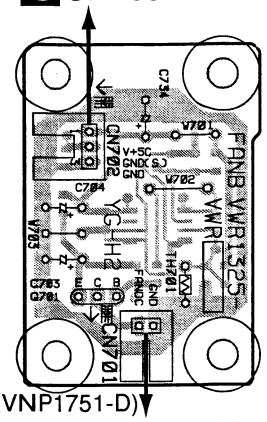

PRIMARY
茶
青
LIVE
NEUTRAL
YG-H2
AC
POWER
CORD
FU1
FU2
H3
H4
H1
H2
C12
V15
V16
V17
V18
LSFB VWR1320-
VWR
C11
C21
F21
F11
C15
V12
V11
V13
V14
S1
CN21
黄
C14
C13
TO MAIN TRANS
MAIN
TRANS
C22
CN11
C16
赤
KN1
TO AUDIO TRANS
AUDIO
TRANS

SIDE A

(VNP1751-D)

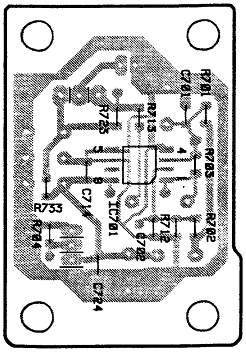
T FANB ASSY

S CN405

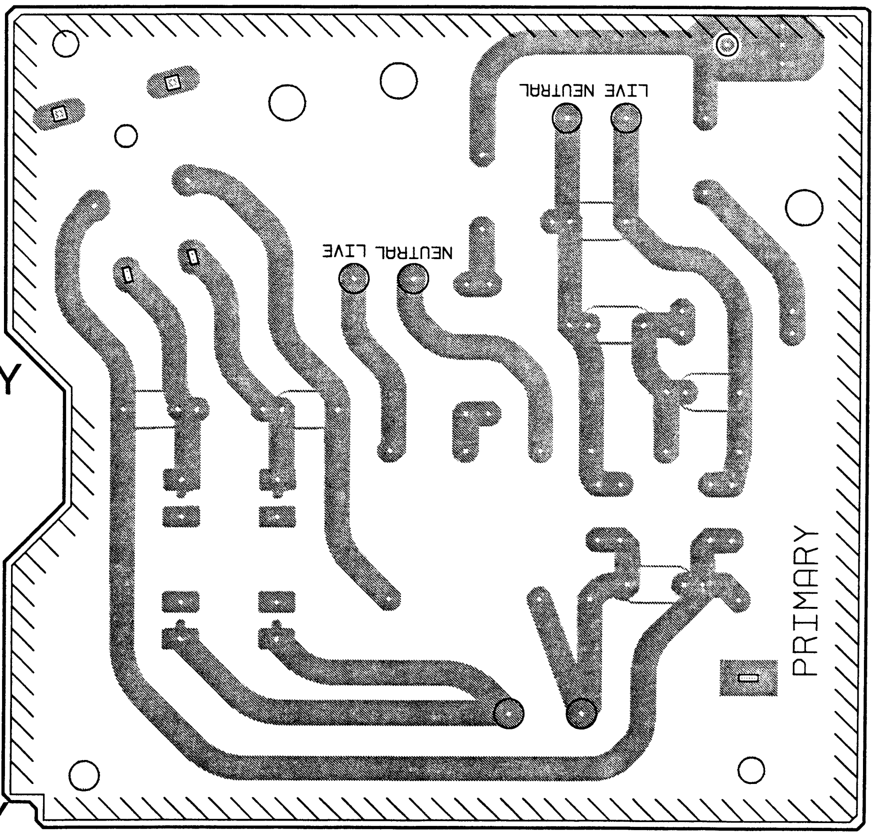

C734
CN702
V+5C
GND(5)
GND
V701
V702
FANB VWR1325-
VWR
C704
YG-H2
V703
TH701
C703
Q701
FANDC
GND
CN701
FAN MOTOR

(VNP1751-D)

(VNP1751-D)


R701
C701
R725
R713
R703
R733
C714
IC701
R712
R704
R702
C724

T FANB ASSY

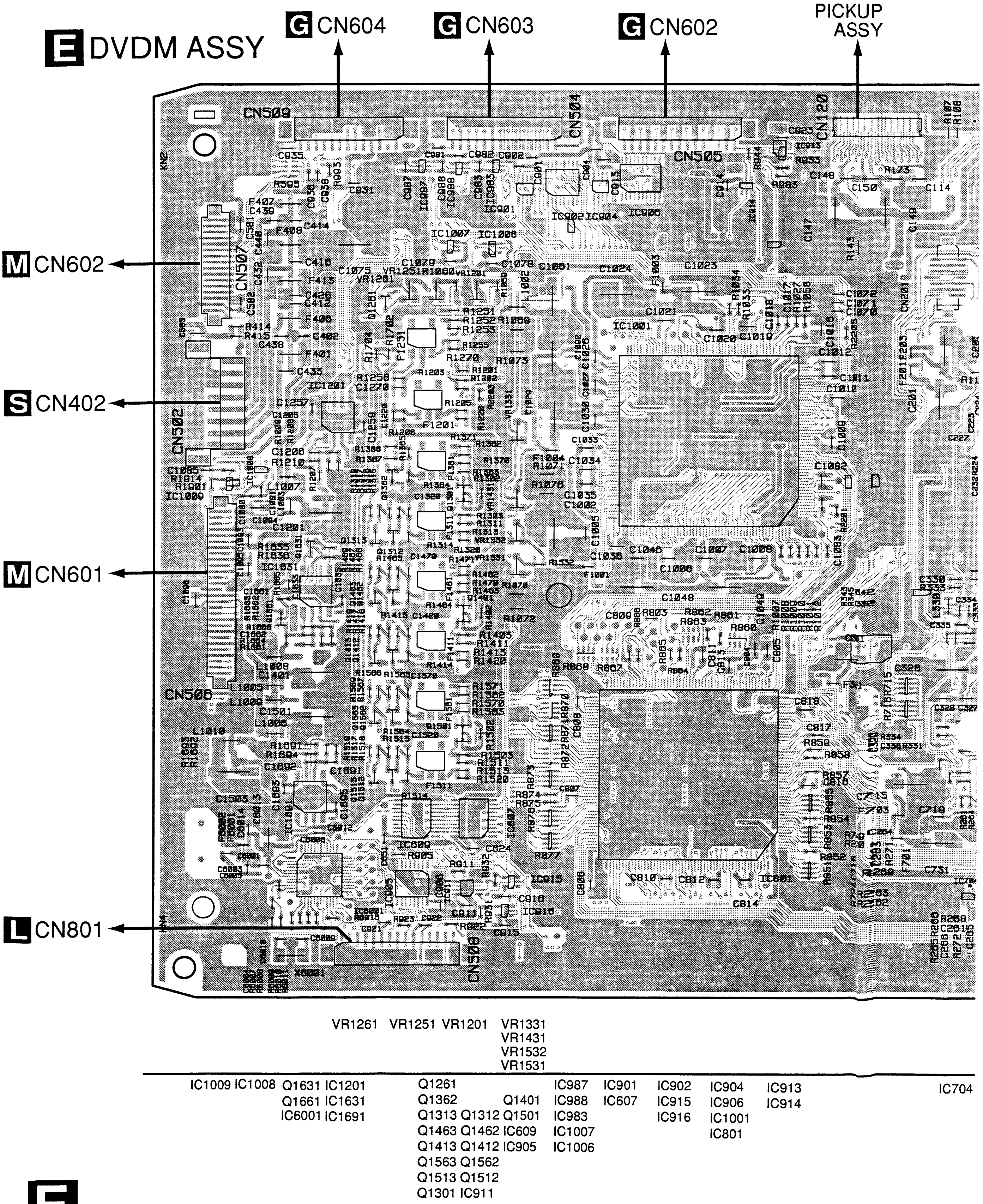

LIVE NEUTRAL
NEUTRAL LIVE
PRIMARY

U LSFB ASSY

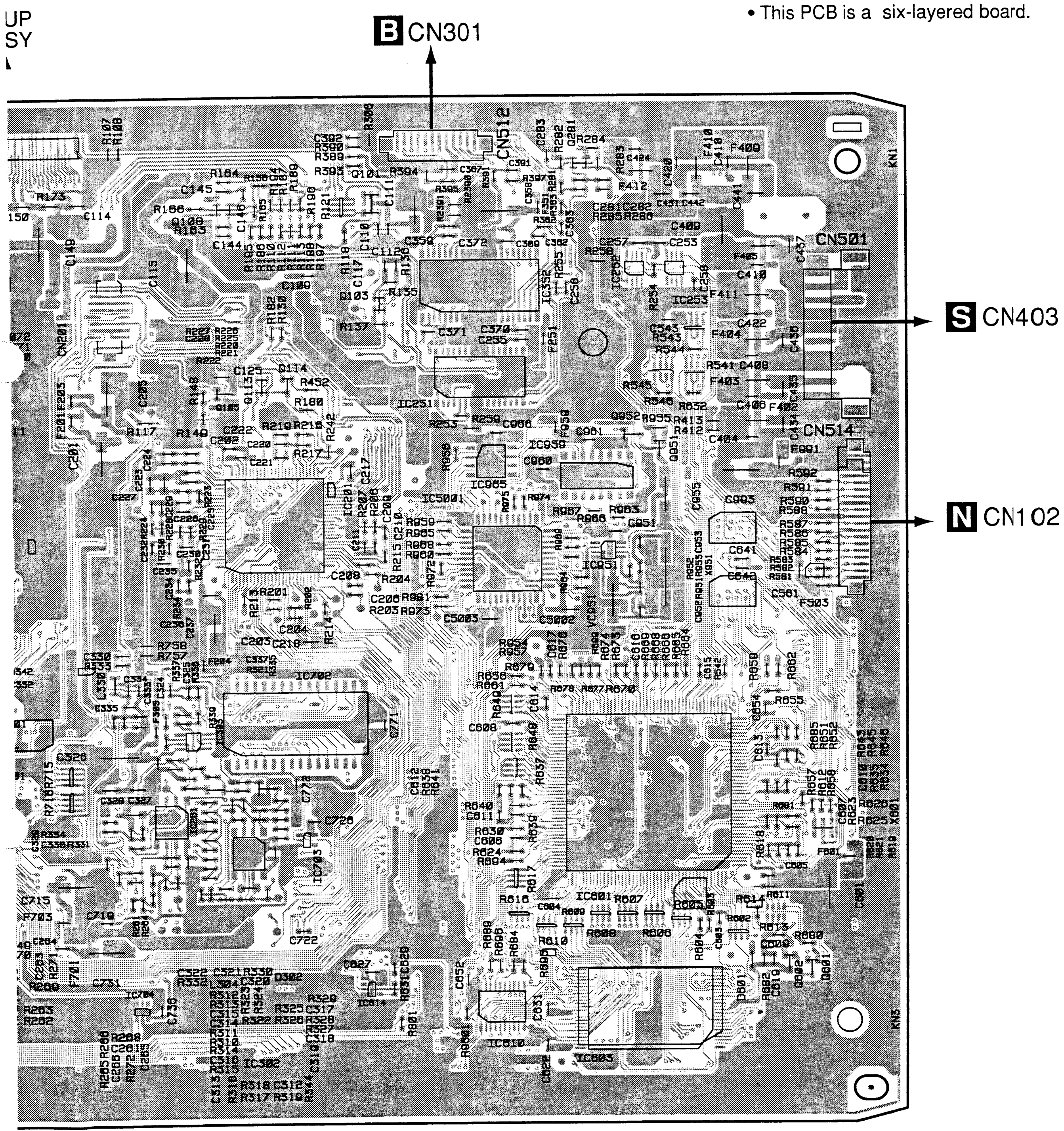
SIDE B

(VNP1751-D)

4.2 DVDM ASSY


A
B
C
D
E DVDM ASSY
G CN604
G CN603
G CN602
PICKUP ASSY
CN509
CN504
CN505
CN120
M CN602
CN507
S CN402
CN502
M CN601
CN506
L CN801
CN508
VR1261 VR1251 VR1201 VR1331
VR1431
VR1532
VR1531
IC1009 IC1008 Q1631 IC1201
Q1661 IC1631
IC6001 IC1691
Q1261
Q1362 Q1401
Q1313 Q1312 Q1501
Q1463 Q1462 IC609
Q1413 Q1412 IC905
Q1563 Q1562
Q1513 Q1512
Q1301 IC911
IC987 IC901
IC988 IC607
IC983
IC1007
IC1006
IC902
IC915
IC916
IC904
IC906
IC1001
IC801
IC913
IC914
IC704

• This PCB is a six-layered board.

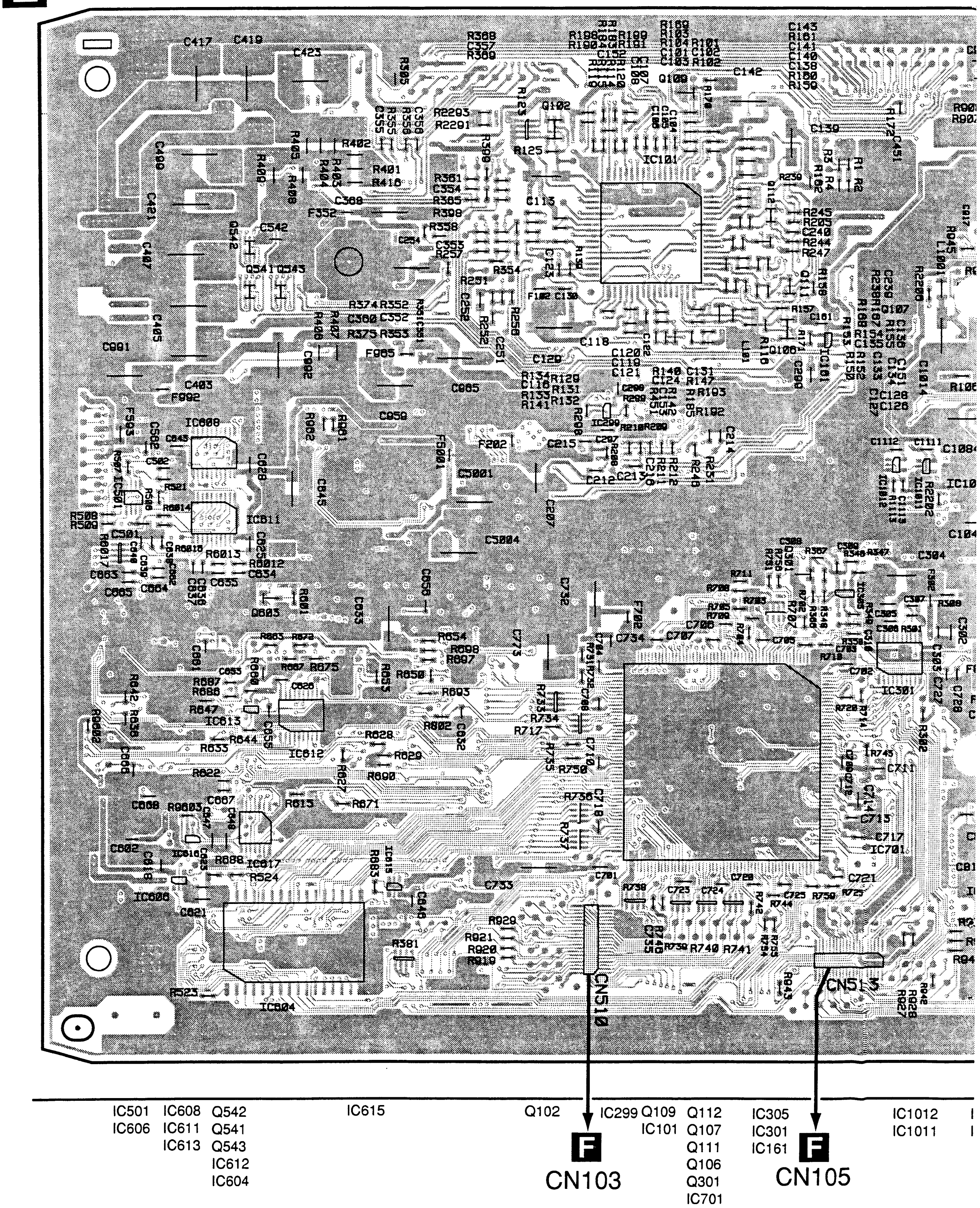

UP
SY
B CN301
CN512
CN501
S CN403
CN514
N CN102
KN1
KN3

(VNP1749-C)

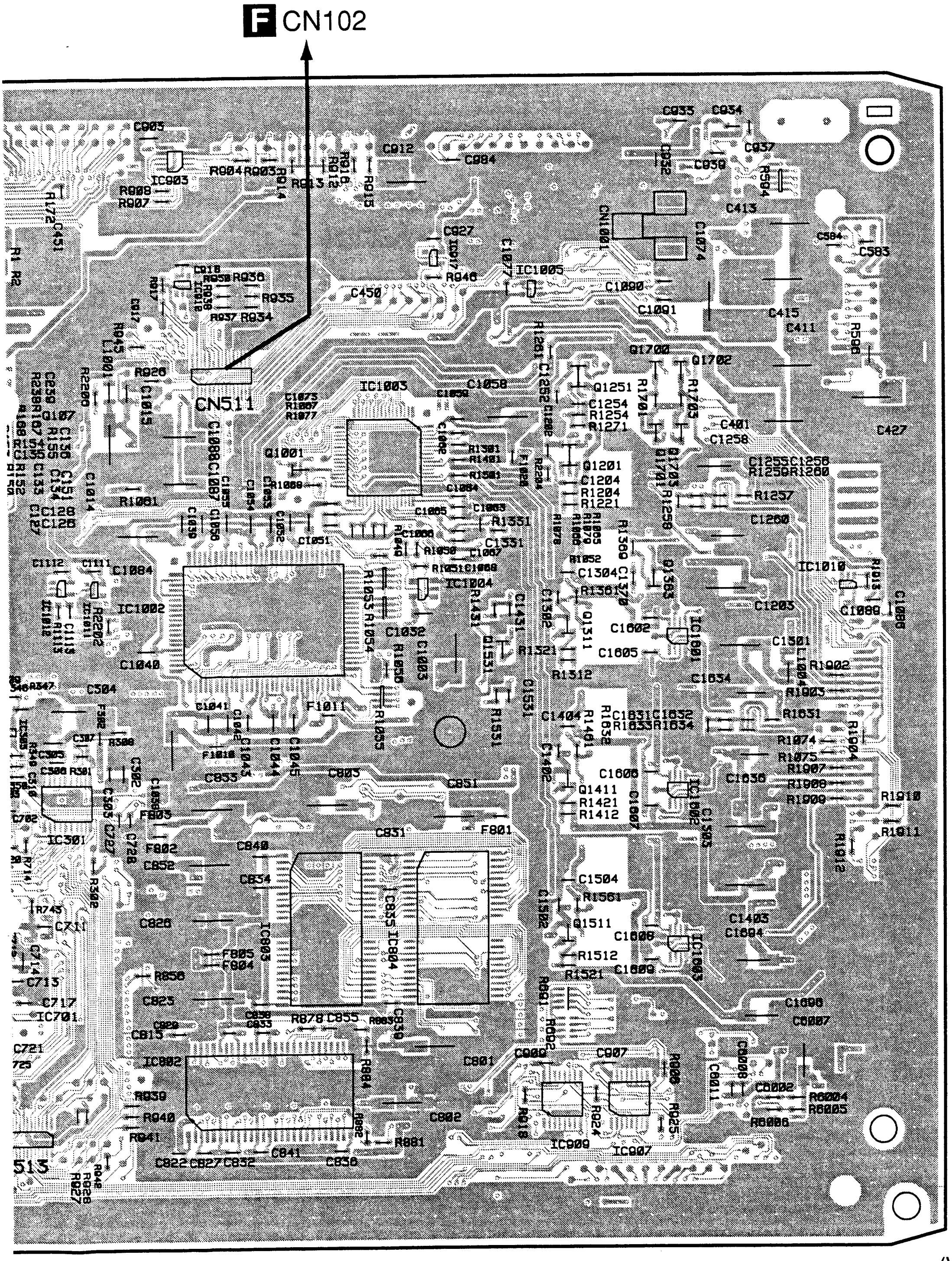
SIDE A

IC704	Q108	Q105	Q113	Q114	Q101	IC352	Q281	IC252	IC253	Q602	Q601
	IC261	IC303	IC201	IC614	Q103	IC251	IC959	Q952	Q951		
	IC302		IC702			IC965	IC951	IC601			
			IC703			IC5001		IC603			
						IC610					

E DVDM ASSY


CN510
CN513
IC101
IC701
IC301
IC604
IC612
IC613
IC615
IC608
IC611
IC501
IC501 IC608 Q542 IC615 Q102 IC299 Q109 Q112 IC305 IC1012
IC606 IC611 Q541 IC101 Q107 IC301 IC1011
IC613 Q543 Q111 IC161
IC612 Q106
IC604 Q301
IC701
F CN103
F CN105

• This PCB is a six-layered board.


F CN102
CN511
C905
IC903
R004
R003
R014
R013
R016
R012
R015
C912
C904
R172
C451
R1
R2
C927
IC917
R046
C1077
IC1005
C450
R935
R934
R937
L1001
R926
R2200
C1015
IC1003
C1058
Q1700
Q1702
Q1251
C1254
R1254
R1271
Q1201
C1204
R1204
R1221
C401
C1258
C427
C1255
C1256
R1259
R1260
R1257
C1260
IC1010
Q1001
R1001
C1084
IC1002
C1040
IC1004
C1032
C1331
R1331
R1431
C1431
Q1311
R1321
R1312
C1602
C1605
IC1601
C1205
C1301
R1002
R1003
R1031
R1074
R1075
R1907
R1908
R1909
R1910
R1911
R1912
C1034
C1030
C1404
R1401
C1031
C1032
R1033
R1034
C1606
Q1411
R1421
R1412
C1607
IC1602
C1504
R1561
Q1511
C1608
R1512
R1521
C1609
IC1603
C1403
C1604
C1690
C0087
C933
C934
C937
C930
R504
CN1001
C1074
C413
C584
C583
C415
C411
R590
C1090
C1091
F1011
F1010
C853
C803
C851
F803
F802
F801
C852
C840
C854
C831
C835
IC804
IC803
C820
F805
F804
R850
C823
R878
C855
C830
C815
IC802
C801
R804
R939
R940
R941
C802
R881
C822
C827
C852
C841
C836
C909
C907
IC909
IC907
R018
R024
R025
R000
C0008
C0011
C0002
R6004
R6005
R6006
IC301
C504
C303
C302
C717
C713
C711
IC701
C721
R743
R302
513
R027
R028
C1112
C1111
IC1012
IC1011
R2202
C128
C126
C135
R154
C151

(VNP1749-C)

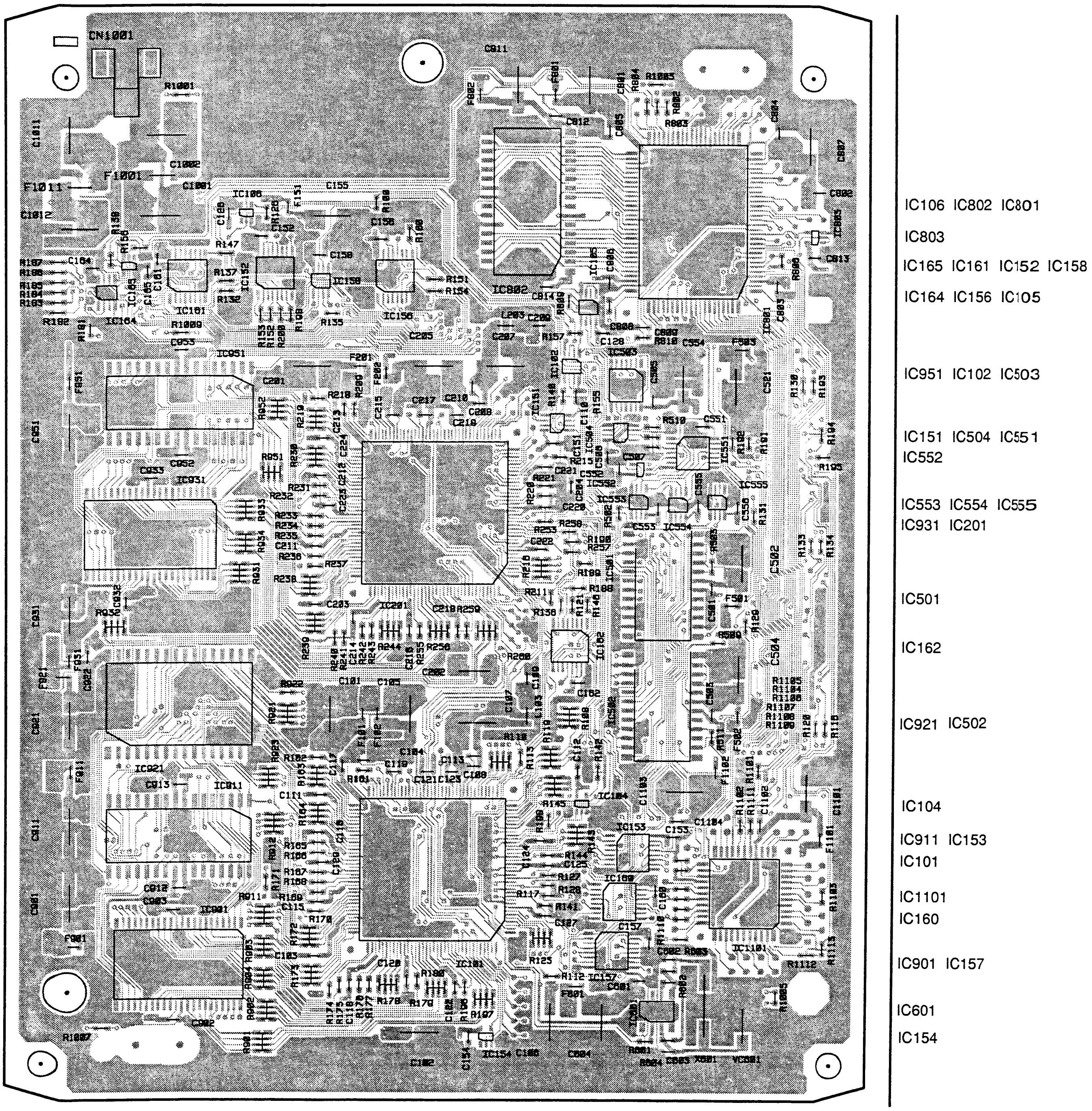
IC1012 IC1011	IC903 IC912	Q1001 IC1002 IC802	IC1003 IC803	IC917 IC1004 IC804	IC1005 Q1251 Q1201 Q1311 Q1531 IC909	Q1700 Q1701 Q1363 IC1602 Q1411 Q1511	Q1702 Q1703 IC1601 IC1603 IC907	IC1010

SIDE B

4.3 DSPB ASSY

- This PCB is a four-layered board.

F DSPB ASSY

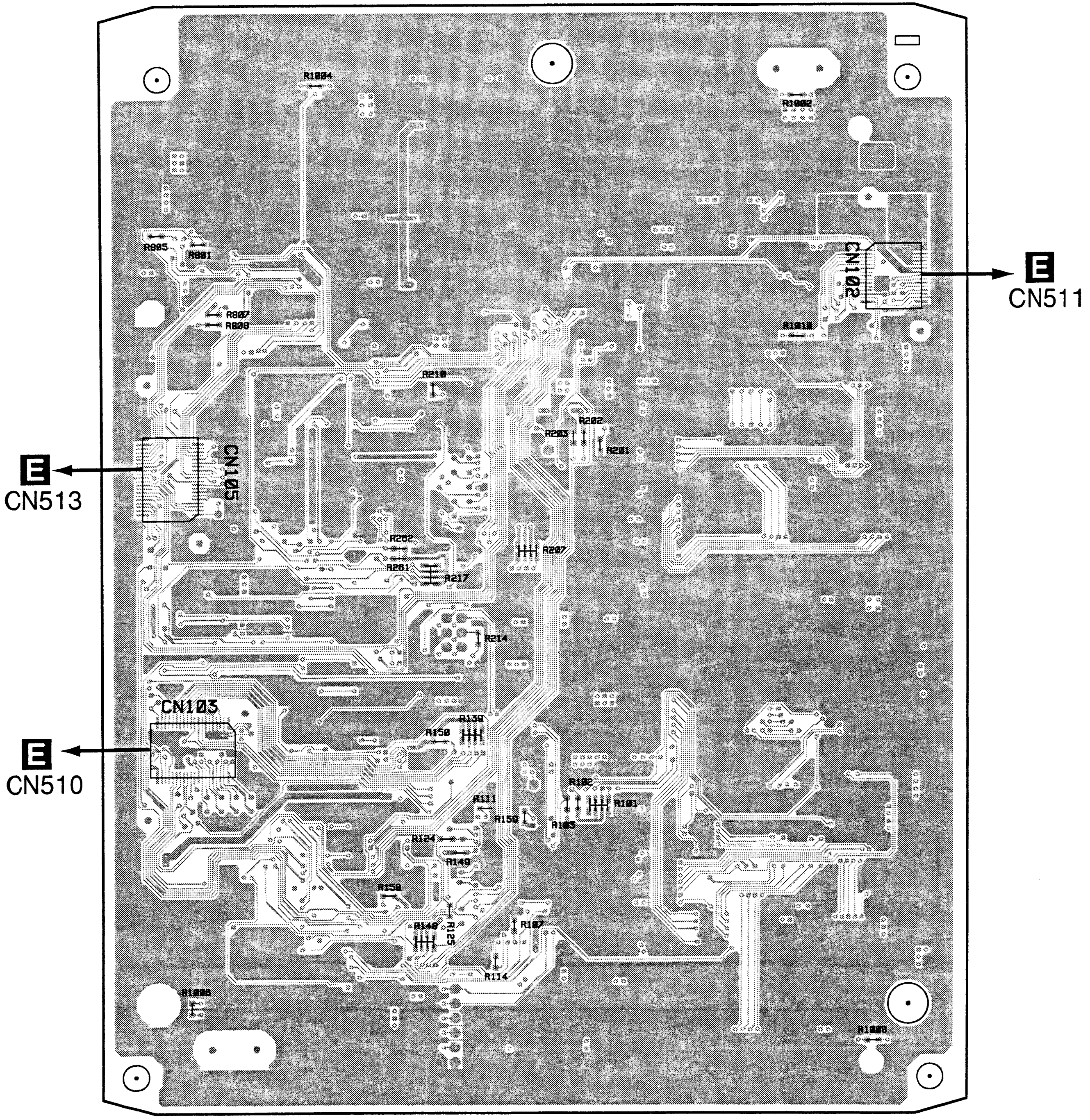

CN1001
IC106 IC802 IC801
IC803
IC165 IC161 IC152 IC158
IC164 IC156 IC105
IC951 IC102 IC503
IC151 IC504 IC551
IC552
IC553 IC554 IC555
IC931 IC201
IC501
IC162
IC921 IC502
IC104
IC911 IC153
IC101
IC1101
IC160
IC901 IC157
IC601
IC154

(VNP1750-B)

SIDE A

• This PCB is a four-layered board.

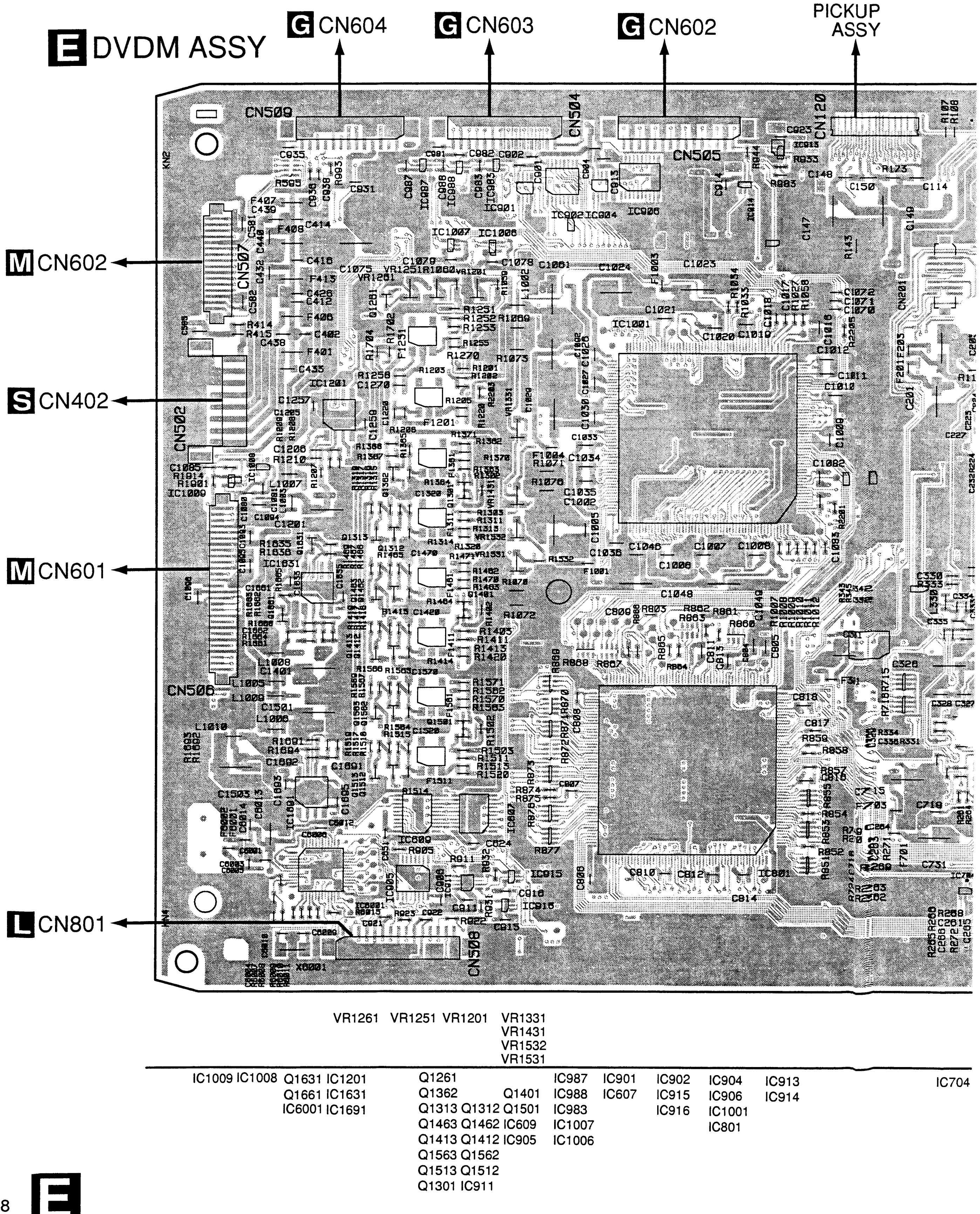
F DSPB ASSY


R1004
R1002
R805
R801
R807
R808
CN102
E
CN511
R1010
R210
R203
R202
R201
E
CN513
CN105
R202
R201
R217
R207
R214
CN103
E
CN510
R130
R150
R102
R101
R111
R150
R103
R124
R149
R159
R148
R125
R107
R114
R1000
R1008

(VNP1750-B)

SIDE B

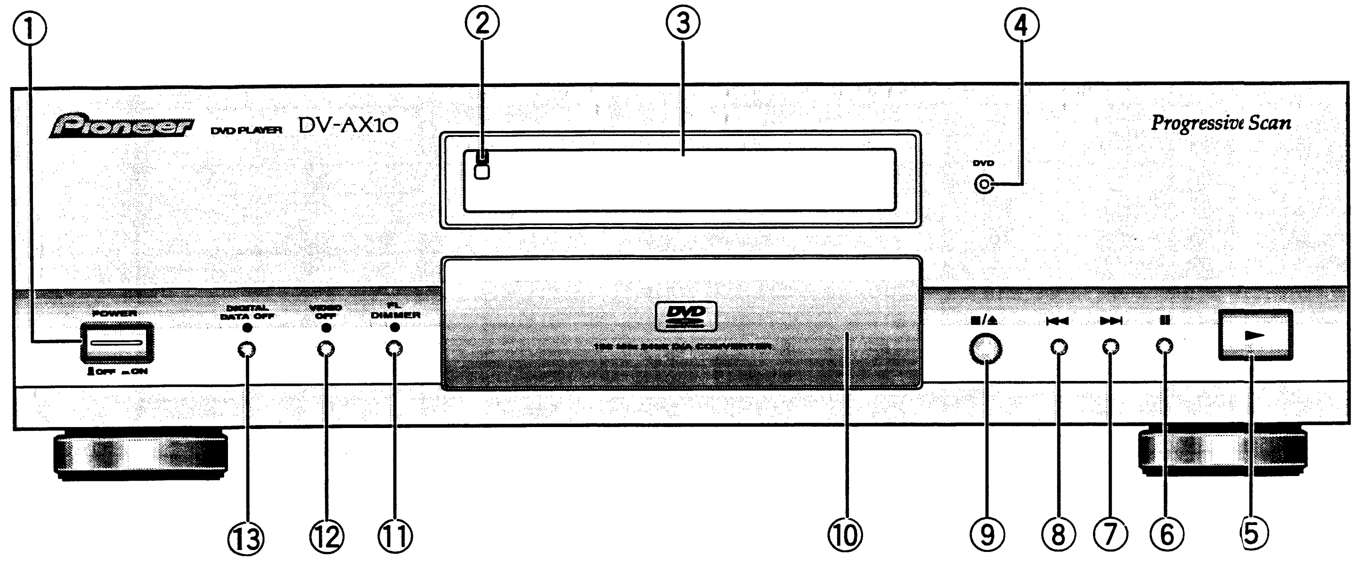
4.2 DVDM ASSY


E DVDM ASSY
G CN604
G CN603
G CN602
PICKUP ASSY
M CN602
S CN402
M CN601
L CN801
CN509
CN504
CN505
CN120
CN507
CN502
CN506
CN508
VR1261 VR1251 VR1201 VR1331
VR1431
VR1532
VR1531
IC1009 IC1008 Q1631 IC1201
Q1661 IC1631
IC6001 IC1691
Q1261
Q1362 Q1401
Q1313 Q1312 Q1501
Q1463 Q1462 IC609
Q1413 Q1412 IC905
Q1563 Q1562
Q1513 Q1512
Q1301 IC911
IC987 IC988 IC983 IC1007 IC1006
IC901 IC607
IC902 IC915 IC916
IC904 IC906 IC1001 IC801
IC913 IC914
IC704

8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

■ Front Panel



① **POWER switch**
Press to switch the player on or off.

② **Remote sensor**
Point the remote control toward the remote sensor to operate the player.

③ **Display window**
Displays system information (page 10). Press **FL OFF** on the front panel or **DIMMER (FL)** on the remote control to adjust the brightness of the display window.

④ **DVD indicator**
Lights when a DVD-Audio disc or DVD-Video disc is loaded in the player. Does not light when a disc format other than DVD is loaded in the player.

⑤ **► (play) button**
Press to start or resume playback.

⑥ **ıı (pause) button**
Press during playback to pause.

⑦ **►►| (forward) button**
Press to advance to chapters, tracks, etc.

⑧ **|◄◄ (reverse) button**
Press to go back to previous chapters, tracks, etc.

⑨ **■ (stop) button**
Press to stop playback. Pressing once enables playback to resume from a point shortly before the location where it stopped.
▲ (open/close) button
Press to open and close the disc tray when stopped.

⑩ **Disc door/Disc tray**
When loading a disc, place in the disc tray with the label side facing up.

⑪ **FL DIMMER button/indicator**
Press to change the brightness of the Display windows and disc illumination in four steps: maximum brightness, medium brightness, minimum brightness, and off. When the Display window is on maximum brightness the **FL DIMMER** indicator on the front panel is off.

⑫ **Video Off button/indicator**
Switches the video signal output on/off
AUTO: If there is a video signal from a loaded disc, video is output. If there is no signal from the disc or there is no disc loaded, no video signal is output.
OFF: No video signal is output.
ON: Video signal is output.
When **OFF** is selected, the indicator lights.

⑬ **DIGITAL DATA OFF button/indicator**
Switches the digital output on/off. When switched off, the indicator lights.

5. PCB PARTS LIST

NOTES :
- *Parts marked by "* NSP *" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 *When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).*

560 Ω → 56 × 10¹ → 561 .... RD1/4PU 5 6 1 *J*
47k Ω → 47 × 10³ → 473 .... RD1/4PU 4 7 3 *J*
0.5 Ω → R50 .... RN2H R 5 0 *K*
1 Ω → 1R0 .... RS1P 1 R 0 *K*

Ex. 2 *When there are 3 effective digits (such as in high precision metal film resistors).*

5.62k Ω → 562 × 10¹ → 5621 .... RN1/4PC 5 6 2 1 *F*

LIST OF PCB ASSEMBLIES

Mark	No.	Description	Part No.
NSP		LOAB ASSY	VWM1798
NSP		├LOMB ASSY	VWG1886
NSP		└LOSB ASSY	VWG1885
		Traverse Mechanism Assy-S	VXX2653
NSP		├SMEB ASSY	VWG2048
NSP		└FGSB ASSY	VWG2009
		DVDM ASSY	VWS1475
		DSPB ASSY	VWG2159
NSP		MADOUT ASSY	VWM1982
		├AUDIO ASSY	VWV1735
		├MAUD ASSY	VWV1737
		└DOUT ASSY	VWG2162
NSP		SYLF ASSY	VWM1989
		├MAPS ASSY	VWR1322
NSP		├BLOUT ASSY	VWV1743
NSP		├BLSW ASSY	VWG2170
		├SYPS ASSY	VWR1324
		├LSFB ASSY	VWR1320
NSP		└FANB ASSY	VWR1325
NSP		FLOUT ASSY	VWM1984
		├FLKB ASSY	VWG2164
		├PLSB ASSY	VWG2166
NSP		├LEDB ASSY	VWG2167
NSP		├DRSB ASSY	VWG2168
NSP		├DRMB ASSY	VWG2169
		└VOUT ASSY	VWV1760

LOAB ASSY

OTHERS

Mark	No.	Description	Part No.
		PC BOARD (LOAB)	VNP1628

A LOMB ASSY

OTHERS

Mark	No.	Description	Part No.
	CN401	KR CONNECTOR	B2B-PH-K-S

B LOSB ASSY

SWITCH

Mark	No.	Description	Part No.
	S301		VSK1011

OTHERS

Mark	No.	Description	Part No.
	CN303	KR CONNECTOR	B2B-PH-K-S
	CN302	8P FFC CONNECTOR	VKN1268
	CN301	12P FFC CONNECTOR	VKN1272

C SMEB ASSY

SWITCH

Mark	No.	Description	Part No.
	S201	Push SW	DSG1016

OTHERS

Mark	No.	Description	Part No.
	CN201	3P FFC CONNECTOR	52044-0345
	CN202	8P FFC CONNECTOR	VKN1212
		PC BOARD(SMEB)	VNP1695

D FGSB ASSY

SEMICONDUCTOR

Mark	No.	Description	Part No.
	PC101		GP2S60

RESISTOR

Mark	No.	Description	Part No.
	R101		RS1/10S331J

E DVDM ASSY

SEMICONDUCTOR

Mark	No.	Description	Part No.
	IC301		ADC08351CIMTC
	IC261, IC302		BA4510F
	IC352		BA5982FP
	IC251		BA6195FP
	IC959		BU2185F
	IC1003		CXD2307R
	IC965		CY2071ASL-371
	IC702		HY51V65804ASLTC-50
	IC1002		HY58163210TQ-10F
	IC101		LA9701M
	IC201		LC78652W
	IC6001		LC89055W-RA8
	IC802		M2V64S40BTP-8L
	IC803, IC804		M5M4V18165DTP-6S
	IC801		M65774FP
	IC601		PD3410A
	IC701		PE5220A
	IC5001		PE9008A
	IC1001		PM0024AF
	IC604		TC55V1001AF8

Mark	No.	Description	Part No.
	IC907, IC909		TC74VHC153FT
	IC902, IC905		TC74VHC157FT
	IC612		TC74VHC541FT
	IC607, IC610		TC74VHC574FT
	IC617		TC74VHC74FT
	IC608, IC609, IC611, IC906		TC74VHCT541AFT
	IC161, IC913–IC916, IC983		TC7SET08FU
	IC987, IC988		TC7SET32FU
	IC1005		TC7SH02FU
	IC1008,IC613, IC614, IC912		TC7SH04FU
	IC1006,IC1009,IC1010,IC917		TC7SH08FU
	IC1011,IC1012		TC7SH14FU
	IC1007,IC606, IC703		TC7SH32FU
	IC299, IC615, IC616		TC7SZ32FU
	IC1601-IC1603,IC252, IC253		TC7W53FU
	IC501		TC7WH126FU
	IC901, IC904, IC911		TC7WH157FU
	IC303, IC903, IC951		TC7WHU04FU
	IC305		TK15404M
	IC1201,IC1631,IC1691		TK15420M
	IC603		VYW1816
	Q 109, Q 1312,Q 1362,Q 1412,Q 1462		2SA1576A
	Q 1512,Q 1562,Q 301		2SA1576A
	Q 105, Q 114, Q 1311,Q 1313,Q 1363		2SC4081
	Q1411, Q1413, Q1463, Q1511,Q1513		2SC4081
	Q 1563,Q 603		2SC4081
	Q 602, Q 951		DTA114EUA
	Q 1701,Q 1703		DTA143EUA
	Q 1001,Q 107, Q 111, Q 601, Q952		DTC114EUA
	Q 1700,Q 1702		DTC143EUA
	Q 108		HN1K03FU
	Q 102, Q 106		IMT1A
	Q 101		IMX1
	Q 1201,Q 1251,Q 1301,Q 1401,Q 1501		IMZ1A
	Q 112, Q 113		UMX1N
	Q 103, Q 281, Q 542, Q 543		UMZ1N
	D 302		KV1470
	D 601		RB501V-40

COILS AND FILTERS

Mark	No.	Description	Part No.
	L1001- L1010		LCYA100J2520
	L304		LCYA1R5J2520
	L 101, L 330		LCYA8R2J2520
	F1201,F1251, F1361, F1461, F1561		VTF1150
	F 1311,F 1411,F 1511		VTF1151
	F401- F413		VTH1040
	L1011, L102, L1020, L 201- L204		VTL1124
	L 251, L 301, L 302, L 305		VTL1124
	L 351, L 352, L 5001,L 6001, L6002		VTL1124
	L 601, L 701- L703, L 801- L805		VTL1124
	L 9001,L 9003,L 9004,L 9010,L959		VTL1124
	L 965, L 991, L 992		VTL1124

CAPACITORS

Mark	No.	Description	Part No.
	C 612		CCSRCH100D50
	C 1070- C1072, C1085, C1086		CCSRCH101J50
	C 1090, C1091, C123, C145, C258		CCSRCH101J50
	C 282, C 617, C643, C655		CCSRCH101J50
	C 661- C664, C666- C668		CCSRCH101J50
	C 727, C728, C935- C939, C984		CCSRCH101J50
	C1113, C216, C313		CCSRCH102J50
	C126, C 333, C 634- C642, C665		CCSRCH150J50

Mark	No.	Description	Part No.
	C981, C 982		CCSRCH150J50
	C 206, C 210, C211		CCSRCH151J50
	C 322		CCSRCH180J50
	C104- C108, C116, C151, C314		CCSRCH220J50
	C152		CCSRCH221J50
	C 632		CCSRCH330J50
	C 209, C 283, C 360, C 391, C 392		CCSRCH331J50
	C 584, C 656		CCSRCH331J50
	C 128, C 134, C 297, C 335		CCSRCH470J50
	C 122, C 208, C 352		CCSRCH471J50
	C127, C 334, C6009, C6010, C953		CCSRCH5R0C50
	C124, C146		CCSRCH680J50
	C117, C240		CCSRCH681J25
	C1370, C1470, C1570, C952		CCSRCJ3R0C50
	C454		CEHAZA101M16
	C115, C 450- C 453		CEHAZA471M6R3
	C1087, C1088		CEV100M35
	C1029,C 1084,C 1092,C 1201,C 1203		CEV101M10
	C1301,C 1303,C 1401,C 1403,C 1501		CEV101M10
	C1503,C 5004,C 645, C 733		CEV101M10
	C113, C 139		CEV220M16
	C1634, C1636, C6013		CEV220M6R3
	C1003		CEV221M4
	C111, C301, C409, C6007		CEV470M6R3
	C140, C223, C224, C252, C264		CKSQYB105K10
	C312		CKSQYB105K10
	C1009- C1012, C1015, C1016		CKSQYF105Z16
	C1019- C1021, C1026, C1027		CKSQYF105Z16
	C1082, C1083, C114, C125, C148		CKSQYF105Z16
	C150, C 217, C 236, C 299, C 367		CKSQYF105Z16
	C431- C442, C5002, C5003, C561		CKSQYF105Z16
	C581, C582, C621, C625, C628		CKSQYF105Z16
	C647, C648, C903, C913		CKSQYF105Z16
	C1005- C1008, C1030, C1033- C1036		CKSQYF225Z16
	C1039- C1046, C1051- C1056		CKSQYF225Z16
	C1093- C1096, C302, C305		CKSQYF225Z16
	C327, C328, C585		CKSQYF225Z16
	C203, C220, C225, C239, C256		CKSRYB103K50
	C320, C321, C362, C363, C502		CKSRYB103K50
	C6002, C6005, C619, C722		CKSRYB103K50
	C101, C1017, C1018, C118- C120		CKSRYB104K16
	C212, C213, C227, C 228, C231		CKSRYB104K16
	C263, C315- C317, C332, C359		CKSRYB104K16
	C369, C370, C418, C420		CKSRYB104K16
	C6003, C6004, C609, C716		CKSRYB104K16
	C281		CKSRYB222K50
	C153, C266		CKSRYB223K50
	C229		CKSRYB224K10
	C261, C351		CKSRYB332K50
	C214, C251, C354		CKSRYB472K50
	C330		CKSRYB682K50
	C133, C136, C355, C356, C703		CKSRYF103Z50
	C102, C1063- C1068, C1073, C121		CKSRYF104Z16
	C138, C308, C310, C713, C717		CKSRYF104Z16
	C933		CKSRYF104Z16
	C1059, C1062, C1077- C1081, C1089		CKSRYF105Z10
	C109, C110, C1111, C1112, C1202		CKSRYF105Z10
	C1204, C1252, C1254, C1257, C1259		CKSRYF105Z10
	C130, C1302, C1304, C131, C1331		CKSRYF105Z10
	C1402, C1404, C143, C1431, C1502		CKSRYF105Z10

Mark	No.	Description	Part No.
	C1504, C1531, C1602, C1605- C1609		CKSRYF105Z10
	C161, C1633, C1635, C1693, C1695		CKSRYF105Z10
	C 202, C 204, C 215, C 221, C 222		CKSRYF105Z10
	C 226, C 230, C 235, C 253, C 255		CKSRYF105Z10
	C 257, C 265, C 298, C 303		CKSRYF105Z10
	C 306, C 307, C 309, C 319, C 329		CKSRYF105Z10
	C 371, C 372, C 402, C 404, C 406		CKSRYF105Z10
	C 408, C 410, C 412, C 414, C 416		CKSRYF105Z10
	C 422, C 424, C 426, C 501		CKSRYF105Z10
	C542, C543, C6001, C6006, C6008		CKSRYF105Z10
	C6011, C6012, C6014, C602- C608		CKSRYF105Z10
	C 610, C 611, C 613- C616, C 618		CKSRYF105Z10
	C622- C624, C 626, C 627, C 631		CKSRYF105Z10
	C646- C648, C 651- C654, C 702		CKSRYF105Z10
	C704- C712, C 714, C 718- C721		CKSRYF105Z10
	C723- C726, C734, C771, C772		CKSRYF105Z10
	C806- C818, C 822, C 827, C 829		CKSRYF105Z10
	C831- C836, C 838- C841		CKSRYF105Z10
	C 901, C 902, C 904, C 906, C 907		CKSRYF105Z10
	C 909, C 911, C 914- C916, C 918		CKSRYF105Z10
	C 921- C923, C 927, C 931, C 932		CKSRYF105Z10
	C 934, C 951, C 960, C 961, C 966		CKSRYF105Z10
	C 983, C 987, C 988		CKSRYF105Z10
	C 357		CKSRYF223Z50
	C1058, C1061, C1074, C1075, C129	(68µF/6.3V)	VCH1188
	C149, C401	(68µF/6.3V)	VCH1188
	C413, C415, C5001	(68µF/6.3V)	VCH1188
	C1058, C1061, C1075, C1092, C129	(100µF/6.3V)	VCH1194
	C149, C201, C403, C405, C645	(100µF/6.3V)	VCH1194
	C 912	(100µF/6.3V)	VCH1194
	C1002, C1014, C1023, C1024, C1038	(150µF/4V)	VCH1195
	C1048, C1049, C1084, C142, C147	(150µF/4V)	VCH1195
	C205, C326, C407, C411, C421	(150µF/4V)	VCH1195
	C423, C499, C5004, C601, C633	(150µF/4V)	VCH1195
	C715, C731- C733, C773	(150µF/4V)	VCH1195
	C801- C803, C823, C826	(150µF/4V)	VCH1195
	C851- C853, C955, C959, C965	(150µF/4V)	VCH1195
	C991- C993	(150µF/4V)	VCH1195
	C 254, C 358, C 368, C 417, C 419	(33µF/16V)	VCH1197
	C427	(33µF/16V)	VCH1197
	C1258, C1260, C1694, C1696, C207	(47µF/6.3V)	VCH1212
	C37, C304	(47µF/6.3V)	VCH1212
	C265, C319, C602- C608	(2.2µF)	VCH1219
	C610, C611, C613- C616, C654		VCH1219
	C702, C704- C712, C718	(2.2µF)	VCH1219
	C720, C721, C724, C725, C734		VCH1219
	C114, C125, C150, C218, C367	(10µF)	VCH1220
	C434, C435, C5002, C5003, C561	(10µF)	VCH1220
	C625, C628, C701, C714, C723	(10µF)	VCH1220
	C804, C811, C813, C816, C818	(10µF)	VCH1220
	C903, C913	(10µF)	VCH1220
	VC951	(20pF)	VCM1008

RESISTORS

Mark	No.	Description	Part No.
	R 738		RAB4C100J
	R 381, R 543, R 545, R 594, R 613		RAB4C103J
	R 637, R 648, R 649, R 691, R 692		RAB4C103J
	R 707, R 715, R 716		RAB4C103J
	R 1053- R1055, R121, R595		RAB4C220J
	R 609, R 610, R 616, R 617		RAB4C220J
	R 733, R 734, R 736- R741, R851		RAB4C220J
	R 853, R 855, R 860, R 863		RAB4C220J
	R 867- R873, R 876, R 877		RAB4C220J
	R 123		RAB4C390J
	R 6017,R 602, R 605- R608		RAB4C470J
	R1069- R1073, R1076, R143, R173		RS1/10S0R0J
	R 401, R 402, R406- R409, R416		RS1/10S0R0J
	R 596		RS1/10S0R0J
	R 1691		RS1/16S1002F
	R1206, R1256, R1314, R1364, R1414		RS1/16S1501F
	R 1464, R1514, R1564, R232		RS1/16S1501F
	R 365, R 398		RS1/16S1503F
	R 1259		RS1/16S1801F
	R 1077- R1079		RS1/16S1802F
	R 1301, R1401, R1501		RS1/16S2000F
	R 1210, R1694		RS1/16S2201F
	R 1207		RS1/16S2202F
	R1220, R1270, R1320, R1370, R1420		RS1/16S2701F
	R 1470,R 1520,R 1570		RS1/16S2701F
	R1058, R1205, R1255, R1313, R1363		RS1/16S3300F
	R1413, R1463, R1513, R1563, R228		RS1/16S3300F
	R332		RS1/16S3300F
	R1065- R1067, R1260		RS1/16S3901F
	R1693		RS1/16S5601F
	R1257		RS1/16S6802F
	R361, R399		RS1/16S7502F
	R1209		RS1/16S9100F
	VR1201, VR1251, VR1331	(470Ω)	VCP1182
	VR1431, VR1531	(470Ω)	VCP1182
	Other Resistor		RS1/16S□□□J

OTHERS

Mark	No.	Description	Part No.
	X601	CERAMIC RESONATOR (20MHz)	DSS1110
	X951	CERAMIC RESONATOR (27.0MHz)	VSS1086
	X6001	CERAMIC RESONATOR (12.2888MHz)	VSS1144
	CN509	CONNECTER	53261-1390
	CN504	CONNECTER	53261-1490
	CN505,CN508	CONNECTER	53261-1590
	CN501	KR CONNECTER	S10B-PH-SM3
	CN502	PH CONNECTER	S8B-PH-SM3
	CN201	B TO CONNECTER14P	VKN1324
	CN512	12P FFC CONNECTER	VKN1416
	CN507	16P FFC CONNECTER	VKN1420
	CN514	19P FFC CONNECTER	VKN1423
	CN506	28P FFC CONNECTER	VKN1432
	CN120	24P FFC CONNECTER	VKN1464
	CN511	B TO CONNECTER 30P	VKN1569
	CN510,CN513	CONNECTER40P	VKN1570

Mark	No.	Description	Part No.
	KN1-KN4	EARTH METAL FITTING	VNF1109

F DSPB ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC501,IC502		CS8404A-CS
	IC801		CXD2751Q
	IC802		KM48V8104CS-6
	IC901,IC931		KM616V1002CT-12
	IC921		PDK038A
	IC911,IC951		TC55V8128BJ-12
	IC503,IC551		TC74LCX74FT
	IC152,IC156,IC157,IC161,IC162		TC74VHC157FT
	IC153,IC160		TC74VHC595FT
	IC104		TC7SET08FU
	IC106,IC154,IC165		TC7SH04FU
	IC552,IC556		TC7SH86FU
	IC504		TC7WH00FU
	IC105		TC7WH04FU
	IC158,IC555		TC7WH125FU
	IC151,IC164,IC553,IC554		TC7WH157FU
	IC102		TC7WH74FU
	IC601		TC7WU04F
	IC101,IC201		XCD56362PV100

COILS AND FILTERS

Mark	No.	Description	Part No.
	L103,L203		LCTA1R0J2520
	F1001,F1011		VTH1040
	L101,L102,L151,L201,L202		VTL1124
	L501-L503,L601,L801,L802		VTL1124
	L901,L911,L921,L931,L951		VTL1124

CAPACITORS

Mark	No.	Description	Part No.
	C603,C809		CCSRCH150J50
	C602		CCSRCH180J50
	C113,C210		CKSRYB562K50
	C808		CKSRYF103Z50
	C103,C104,C108-C112		CKSRYF105Z10
	C115-C129,C151-C154		CKSRYF105Z10
	C156-C158,C160-C162		CKSRYF105Z10
	C164,C165,C203,C204		CKSRYF105Z10
	C208,C209,C211-C224,C501		CKSRYF105Z10
	C503,C505,C506,C551-C553		CKSRYF105Z10
	C555-C557,C601,C802-C806		CKSRYF105Z10
	C812,C814,C902,C903		CKSRYF105Z10
	C912,C913,C922,C932,C933		CKSRYF105Z10
	C952,C953		CKSRYF105Z10
	C1002,C502,C504, C1001 (68µF/6.3V)		VCH1188
	C101,C1011,C102,C105- C107 (150µF/4V)		VCH1195
	C155,C201,C205,C207,C521 (150µF/4V)		VCH1195
	C554,C604,C801,C807,C811 (150µF/4V)		VCH1195
	C901,C911,C921,C931,C951 (150µF/4V)		VCH1195
	C202 (47µF/6.3V)		VCH1212

RESISTORS

Mark	No.	Description	Part No.
	R101,R108,R139,R143,R145(10kΩ)		DCN1094
	R148,R207,R217 (10kΩ)		DCN1094
	R110,R119,R123,R163,R164 (22Ω)		DCN1104
	R172,R173,R178,R180,R197 (22Ω)		DCN1104
	R216,R219,R230,R238,R239 (22Ω)		DCN1104
	R244,R256,R260,R901-R904 (22Ω)		DCN1104
	R911,R912,R921,R923 (22Ω)		DCN1104
	R931-R934,R951,R952 (22Ω)		DCN1104
	Other Resistors		RS1/16S□□□J

OTHERS

Mark	No.	Description	Part No.
	X601	CERAMIC RESONATOR	ASS7023
	CN102	B TO CONNECTOR 30P	VKN1571
	CN103,CN105	CONNECTOR40P	VKN1572

G MAUD ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC609		LM2940CT-5.0
	IC741, IC751, IC761, IC771		OPA2134PA
	IC701, IC711, IC721, IC731		PCM1704U-J
	IC661, IC671		PD0236AM-TFB
	IC608		PST994I
	IC681, IC691		SM5847AF
	IC601		TC74VHC153FT
	IC604		TC74VHC595FT
	IC602, IC603		TC74VHCT541AFT
	IC605–IC607, IC610		TC7SHU04FU
	Q 605		2SA1037K
	Q 603, Q 604		2SD1859X
	Q 601, Q 607		2SK2033
	Q 602, Q 606		DTA124EK
	D 601–D 604		1SS355
	D 701, D 702		E-153RE

COILS AND FILTERS

Mark	No.	Description	Part No.
	F 602–F 604, F 661, F 671		DTF1070
	F 681–F 685, F 691–F 695		DTF1070
	L 601, L 602, L 605–L 607		LCYA220J2520
	L 604		VTL1079
	L 620–L 622		VTL1080

RELAY

Mark	No.	Description	Part No.
	RY701,RY702		RSR1026
	RY601-RY603		VSR1008

CAPACITORS

Mark	No.	Description	Part No.
	C642,C784,C785		CCSQCH471J50
	C1003-C1006		CCSRCH331J50
	C703,C707,C713,C717,C723		CEBA470M50
	C727,C733,C737		CEBA470M50
	C704,C706,C714,C716,C724		CEGA470M25
	C726,C734,C736		CEGA470M25
	C615,C621		CEHAZA101M16
	C616,C617,C661,C671		CEHAZA221M6R3
	C680,C681,C683,C685,C687		CEHAZA221M6R3
	C690,C691,C693,C695,C697		CEHAZA221M6R3
	C 663–C 666, C 673–C 676		CCSRCH390J50

Mark	No. Description	Part No.
	C 601, C 603, C 605, C 607, C 618	CEHAZA471M6R3
	C 620, C 701, C 702, C 711, C 712	CEHAZA471M6R3
	C721, C722, C731, C732	CEHAZA471M6R3
	C1001, C1002	CKCYB102K50
	C1009, C1010	CKSQYF104Z25
	C1013, C1015	CKSQYF105Z16
	C619, C782, C783	CKSQYF105Z50
	C1018, C1019, C639– C641, C786	CKSQYF225Z16
	C788, C789, C1019	CKSQYF225Z16
	C613, C614	CKSRYF104Z25
	C1011, C1020, C1021, C602, C604	CKSRYF105Z10
	C606, C 608– C612, C623, C624	CKSRYF105Z10
	C626– C632, C634, C637, C638	CKSRYF105Z10
	C660, C 662, C 670, C 672, C 682	CKSRYF105Z10
	C684, C 686, C 688, C 689, C 692	CKSRYF105Z10
	C694, C696, C698, C699, C787	CKSRYF105Z10
	C622, C 625, C 633, C 636	CKSRYF474Z16
	C744, C 754, C 764, C 774 (220pF)	VCE1034
	C746, C 756, C 766, C 776 (470pF)	VCE1035
	C745, C 755, C 765, C 775 (1000pF)	VCE1041
	C1007, C1008, C705, C715, C725 (47μF/63V)	VCH1203
	C735, C741, C742, C747 (47μF/63V)	VCH1203
	C751, C752, C757, C761, C762 (47μF/63V)	VCH1203
	C767, C771, C772, C777 (47μF/63V)	VCH1203
	C780, C781 (47μF/63V)	VCH1203
	C604, C606, C623, C624, C634 (2.2μF)	VCH1219
	C660, C670 (2.2μF)	VCH1219
	C626, C635, C637, C638, C9652 (10μF)	VCH1220

RESISTORS

Mark	No. Description	Part No.
	R744, R754, R 764, R 774	RDR1/2PM104J
	R742, R 743, R 752, R 753	RDR1/2PM182J
	R762, R 763, R 772, R 773	RDR1/2PM182J
	R1040, R780– R 789	RS1/10S0R0J
	R626, R636, R702, R712, R722	RS1/10S103J
	R732	RS1/10S103J
	R1001, R1002, R1018	RS1/10S330J
	R681– R684, R691– R694	RS1/10S470J
	R627, R632	RS1/10S472J
	R638– R647	RS1/10S473J
	R745, R755, R765, R775 (470Ω)	VCN1130
	R746, R756, R766, R776 (2.7kΩ)	VCN1131
	Other Resistors	RS1/16S□□□J

OTHERS

Mark	No. Description	Part No.
	CN604, CN607 CONNECTOR	53047-1310
	CN603, CN606 CONNECTOR	53047-1410
	CN602, CN605 CONNECTOR	53047-1510
	IC Cover Sheet	VEC1815
	Screw	BBZ30P050FCC

MADOUT ASSY

OTHERS

Mark	No. Description	Part No.
	PC BOARD (MADOUT)	VNP1751

H MAPS ASSY

SEMICONDUCTORS

Mark	No. Description	Part No.
⚠	IC501, IC511, IC521, IC531	ICP-N38
	IC502, IC503	NJM4580DD
	Q 504, Q 512, Q 531	2SA1037K
⚠	Q 513, Q 532	2SA1262
	Q 502, Q 521	2SC2412K
⚠	Q 503, Q 522	2SC3179
	Q 505	2SK2033
	Q 501	DTA124EK
	Q 511	DTC124EK
⚠	D 501, D 502, D 511, D 512	31DF2-FC5
⚠	D 503, D 504, D 513, D 514	31DF2-FC6
	D 521, D 531	UDZ3.6B
	D 505, D 506, D 515, D 516	UDZS5.6B

CAPACITORS

Mark	No. Description	Part No.
	C505,C508,C515,C518,C521	CEBA101M25
	C524,C531,C534	CEBA101M25
	C503,C513	CKSQYF103Z50
	C537– C539	CKSQYF225Z16
	C506,C516,C522,C532	CMA101J2H
	C504,C514 (3300μF/35V)	VCH1201
	C507,C517,C523,C533 (4.7μF/50V)	VCH1202
	C501,C502,C511,C512 (1μF/50V)	VCH1207
	C509,C519,C525,C535 (220μF/50V)	VCH1217

RESISTORS

Mark	No. Description	Part No.
	R501,R511	RDR1/2PM8R2J
	Other Resistors	RS1/10S□□□J

OTHERS

Mark	No. Description	Part No.
	CN501 4P Top Post	B4P-VH
	KN501 EARTH METAL FITTING	VNF1084
	Screw	BBZ30P050FCC

I AUDIO ASSY

SEMICONDUCTORS

Mark	No. Description	Part No.
⚠	IC272	BA033F
⚠	IC421, IC431, IC441, IC451	ICP-N38
⚠	IC271	LM2940CT-5.0
	IC422, IC442	NJM4580M-TFB
	IC311, IC331, IC341, IC342, IC361	OPA2134PA
	IC381,IC391,IC392	OPA2134PA
	IC301,IC321,IC351,IC371	PCM1704U-J
	IC131	PD0236AM
	IC261	PST9141
	IC171	SM5847AF
	IC101	TC74VHC153FT
	IC141, IC151	TC74VHC595FT
	IC111, IC121	TC7WHU04FU
	Q 315, Q 323, Q 335, Q 365, Q 385	2SA1037K
	Q 412, Q 441, Q 451	2SA1037K

Mark	No.	Description	Part No.
⚠	Q 442, Q 452		2SA1262
	Q 221, Q 222		2SB1237X
	Q 421, Q 431		2SC2412K
⚠	Q 422, Q 432		2SC3179
	Q 262		2SD1859X
	Q 316, Q 336, Q 366, Q 386		2SD2114K
	Q 223, Q 224, Q 263, Q 411		2SK2033
	Q 264, Q 413		DTA124EK
	Q 312, Q 321, Q 322, Q 362, Q 371		DTA143EK
	Q 414		DTC124EK
	D 271, D 272		1SS355
⚠	D 401, D 402, D 407, D 408		31DF2-FC5
⚠	D 403–D 406		31DF2-FC6
	D 311, D 341, D 361, D 391		E-153RE
	D 432, D 452		UDZ3.6B
	D 421, D 422, D 441, D 442		UDZS5.6B

COILS AND FILTERS

Mark	No.	Description	Part No.
	F 141, F 151		DTF1070
	L 101, L 111, L 121, L 131		LCTA100J3225
	L 171, L 172, L 181–L 184		LCTA100J3225
	L 114, L 124		VTL1079
	L 100		VTL1080
	L 113, L 123		VTL1109

RELAY

Mark	No.	Description	Part No.
	RY301,RY302,RY351,RY352		RSR1026
	RY9302,RY9502		VSR1008

CAPACITORS

Mark	No.	Description	Part No.
	C 177, C 179		CCSQCH100D50
	C 329, C 330, C 379, C 380		CCSQCH391J50
	C 426, C 427, C 436, C 437		CCSQCH391J50
	C 446, C 447, C 456, C 457		CCSQCH391J50
	C 9271,C 9272		CCSQCH391J50
	C 176, C 178, C 201–C 203		CCSRCH100D50
	C 173		CCSRCH102J50
	C 9701-C 9705		CCSRCH331J50
	C 317, C 337, C 367, C 387		CCSRCH471J50
	C 114		CCSRCH4R0C50
	C 124		CCSRCH6R0D50
	C 421, C 424, C 431, C 434, C 441		CEBA101M25
	C 444, C 451, C 454		CEBA101M25
	C 305, C 307, C 325, C 327, C 355		CEBA470M50
	C 357, C 375, C 377		CEBA470M50
	C 304, C 306, C 324, C 326, C 354		CEGA470M25
	C 356, C 374, C 376		CEGA470M25
	C 253, C 271, C 310		CEHAZA101M16
	C 172, C 175, C 182, C 184, C 188		CEHAZA221M6R3
	C 221, C 226, C 252, C 272		CEHAZA221M6R3
	C 274, C 275		CEHAZA221M6R3
	C 301, C 302, C 321, C 322		CEHAZA471M6R3
	C 351, C 352, C 371, C 372		CEHAZA471M6R3
	C 328, C 378		CKCYB102K50
	C 405, C 406		CKSQYB103K50
	C 9308,C 9328,C 9358,C 9378		CKSQYF105Z16
	C 318, C 320, C 338, C 340, C 344		CKSQYF105Z50
	C 368, C 370, C 388, C 393, C 394		CKSQYF105Z50
	C 9001-C 9004,C 9901-C 9903		CKSQYF225Z16
	C 9252		CKSRYF104Z16
	C 101, C 111, C 121, C 131, C 141		CKSRYF105Z10
	C 151, C 171, C 174, C 181, C 183		CKSRYF105Z10

Mark	No.	Description	Part No.
	C 185, C 187, C 261, C 262, C 9251		CKSRYF105Z10
	C 9253-C 9255,C 9301,C 9302,C 9305		CKSRYF105Z10
	C 9307,C 9321,C 9322,C 9325,C 9327		CKSRYF105Z10
	C 9351,C 9352,C 9355,C 9357		CKSRYF105Z10
	C 9371,C 9372,C 9375,C 9377		CKSRYF105Z10
	C 422, C 432, C 442, C 452		CMA101J2H
	C 313, C 333, C 363, C 383 (220pF)		VCE1034
	C 315, C 335, C 365, C 385 (470pF)		VCE1035
	C 316, C 336, C 366, C 386 (220pF)		VCE1040
	C 132, C 186 (100µF/6.3V)		VCH1194
	C 102, C 112, C 122 (150µF/4V)		VCH1195
	C 423, C 433, C 443, C 453 (4.7µF/50V)		VCH1202
	C 303, C 311, C 312, C 319, C 323 (47µF/63V)		VCH1203
	C 331, C 332, C 339, C 341, C 342 (47µF/63V)		VCH1203
	C347– C349, C353, C361, C362 (47µF/63V)		VCH1203
	C369, C373, C381, C382, C389 (47µF/63V)		VCH1203
	C391, C392, C397– C399(47µF/63V)		VCH1203
	C461– C463 (47µF/63V)		VCH1203
	C401– C404 (1µF/50V)		VCH1207
	C425, C435, C445 (220µF/50V)		VCH1217
	C455 (220µF/50V)		VCH1217
	C411, C412 (3900µF/50V)		VCH1218
	C141, C151, C9251, C9253, C9254 (2.2µF)		VCH1219
	C101, C187, C222, C227, C273 (10µF)		VCH1220
	C276 (10µF)		VCH1220
	VC111,VC121 (10pF)		VCM1012

RESISTORS

Mark	No.	Description	Part No.
	R 346, R 347, R 396, R 397		RDR1/2PM202J
	R 315, R 335, R 365, R 385		RDR1/2PM203J
	R 318, R 338, R 348, R 368, R 388		RDR1/2PM223J
	R 398		RDR1/2PM223J
	R 312, R 313, R 332, R 333		RDR1/2PM392J
	R 344, R 345, R 362, R 363		RDR1/2PM392J
	R 382, R 383, R 394, R 395		RDR1/2PM392J
	R 401, R 402		RDR1/2PM3R2J
	R 261, R 316, R 336, R 366, R 386		RS1/16S0R0J
	R 112, R 122, R 131– R133		RS1/16S101J
	R172– R175		RS1/16S101J
	R269, R 327– R329, R425, R435		RS1/16S103J
	R 445, R 455		RS1/16S103J
	R 111, R 121		RS1/16S105J
	R 424, R 444		RS1/16S123J
	R 426, R 446		RS1/16S183J
	R 265		RS1/16S223J
	R 436, R 456		RS1/16S242J
	R 108, R 206– R208, R 251		RS1/16S330J
	R 326		RS1/16S332J
	R 221, R 222, R 226, R 227, R 253		RS1/16S472J
	R 267, R 268		RS1/16S472J
	R 434, R 454		RS1/16S682J
	R 319, R 339, R 349, R 369, R 389		VCN1130
	R 399 (470Ω)		VCN1130
	R 311, R 331, R 361, R 381 (2.7kΩ)		VCN1131
	Other Resistors		RS1/10S□□□J

Mark	No.	Description	Part No.

OTHERS

	CN251	CONNECTOR	53047-1310
	CN201	CONNECTOR	53047-1410
	CN101	CONNECTOR	53047-1510
	CN351	KR CONNECTOR	B4B-PH-K-R
	CN301	KR CONNECTOR	B4B-PH-K-S
	CN401	4P Top Post	B4P-VH
		IC Cover Sheet	VEC1815
	JA352	1P PIN JACK (Red)	VKB1143
	JA302	1P PIN JACK (White)	VKB1144
	KN101	EARTH METAL FITTING	VNF1084
		BUS LINE PLATE (B)	VNF1113
		Screw	BBZ30P050FCC
	X111	CRYSTAL RESONATOR (33.8688MHz)	VSS1132
	X121	CRYSTAL RESONATOR (36.864MHz)	VSS1133

J BLOUT ASSY

RESISTORS

	R 901,R951,R991,R992,R994		RS1/10S0R0J

CAPACITORS

	C 902,C903,C952,C953		CCSQCH101J50

OTHERS

	CN901	KR CONNECTOR	S10B-PH-K-S
	JA901,JA951	CANNON CONNECTOR	VKN1531
	CN6601	B TO B CONNECTOR 3P	VKN1593

SYLF ASSY

OTHERS

		PC BOARD (SYLF)	VNP1766

K BLSW ASSY

SWITCHES

	S9101	Slide SW	DSH1008

CAPACITORS

	C 9105		CKSQYF225Z16

RESISTORS

	R9102,R9103		RS1/10S0R0J

OTHERS

	CN9902	B TO B CONNECTOR 5P	VKN1357

L DOUT ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC871		LM2940CT-5.0
	IC821,IC831		TC74VHC153FT
	IC811		TC74VHC595FT
	IC901,IC911		TC74VHCU04FT
	IC841,IC861		TC7W08FU
	IC931		TC7WH125FU
	IC921		TC7WHU04FU
	Q863,Q865,Q941,Q943		2SB1237X
	Q831,Q861,Q862,Q864,Q942		DTC124EK
	D871,D931,D932,D941,D942		1SS355

COILS AND FILTERS

	L811,L831,L931		LCTA100J3225
	L901,L911,L921,L923		LCTA220J3225
	L905,L915		PTL1003

RELAY

	RY941,RY942		VSR1008

CAPACITORS

	C 952, C 953		CCSQCH100D50
	C 804, C 805, C 908, C 918		CCSQCH101J50
	C 822, C 832		CCSQCH330J50
	C 823, C 833		CCSRCH330J50
	C 875		CEHAZA101M16
	C 863, C 865, C 871, C 876, C 902		CEHAZA221M6R3
	C 912, C 922, C 924, C 932, C 941		CEHAZA221M6R3
	C 921		CKSQYF105Z16
	C 944, C 945		CKSQYF225Z16
	C 903, C 906, C 913, C 916		CKSRYB103K50
	C 801, C 811, C 821, C 831, C 841		CKSRYF105Z10
	C 861, C 901, C 911, C 923, C 931		CKSRYF105Z10
	C 942, C 943		CKSRYF105Z10
	C 802		CKSRYF474Z16
	C 904, C 914 (47µF/16V)		VCH1208

RESISTORS

	R 906, R 916		RS1/10S0R0J
	R 887		RS1/10S103J
	R 907, R 917		RS1/10S220J
	R 813, R 815, R 817, R 818, R 821		RS1/10S330J
	R 926		RS1/10S822J
	R 9821,R 9841,R 9861		RS1/8S0R0J
	Other Resistors		RS1/16S□□□J

OTHERS

	CN801	CONNECTOR	53047-1510
	JA901	1P PIN JACK	PKB1004
	J931	STEREO MIN JACK	QKN1004
	JA921	OPTICAL LINK OUT	TOTX176(HS)
	JA911	SRD PIN JACK	VKB1076
		SCREW PLATE	VNE1948
	KN801,KN802	EARTHMETAL FITTING	VNF1084

M VOUT ASSY

SEMICONDUCTORS

	IC501, IC601		TA7302P
	IC602–IC607		TK15420M
	Q 505, Q 605		2SC2412K
	Q 513, Q 608, Q 613–Q 615		2SC4081
	Q 501, Q 502, Q 551, Q 601, Q 602		2SK2033
	Q 609, Q 611		2SK2033
	Q 503, Q 504, Q 552, Q 603, Q 604		DTA143EK
	Q 610, Q 612		DTA143EK
	Q 506, Q 606		IMZ1A
	D 501, D 502, D 551, D 552		1SS355
	D 601, D 602, D 660		1SS355

Mark	No.	Description	Part No.

COILS AND FILTERS

Mark	No.	Description	Part No.
	L501,L601,L602		LCTA470J3225
	L636,L638,L648,L652,L656		VTL1100
	L681-L684		VTL1100

SWITCH ADN RELAY

Mark	No.	Description	Part No.
	S501		VSH1020
	RY551,RY552		VSR1015

CAPACITORS

Mark	No.	Description	Part No.
	C671,C681		CCSQCH102J50
	C505		CCSQCH390J50
	C663		CCSQCH470J50
	C518,C618		CCSRCH102J50
	C605,C622		CCSRCH390J50
	C664		CCSRCH470J50
	C621		CCSRCJ3R0C50
	C535,C616,C635,C643,C647		CEV100M16
	C512,C514,C550,C551,C627		CEV220M6R3
	C629,C651-C656		CEV220M6R3
	C501,C503,C612,C614,C660		CEV470M6R3
	C506-C509,C511,C606-C609		CKSQYB103K50
	C611		CKSQYB103K50
	C662		CKSQYF104Z25
	C510,C610		CKSQYF105Z16
	C631,C632		CKSRYB103K50
	C502,C504,C513,C515,C519		CKSRYF105Z10
	C520,C602,C604,C613,C615		CKSRYF105Z10
	C619,C620,C623,C624,C628		CKSRYF105Z10
	C630,C636,C637,C644,C645		CKSRYF105Z10
	C661,C665-C670,C682,C683		CKSRYF105Z10
	C601,C603	(68μF/6.3V)	VCH1188

RESISTORS

Mark	No.	Description	Part No.
	R510,R610,R632,R666-R671		RS1/10S0R0J
	R677,R679		RS1/10S1002F
	R631		RS1/10S102J
	R512,R612,R633,R634		RS1/10S103J
	R507,R607,R630		RS1/10S152J
	R509,R609		RS1/10S221J
	R506		RS1/10S331J
	R513,R613		RS1/10S332J
	R511,R611		RS1/10S333J
	R508,R608		RS1/10S471J
	R678		RS1/10S6801F
	R514		RS1/10S680J
	R635,R637,R639,R640,R643		RS1/10S75R0F
	R645,R647,R651,R655		RS1/10S75R0F
	R620,R621		RS1/16S1001F
	R673,R675		RS1/16S1002F
	R674		RS1/16S1502F
	R617,R618		RS1/16S2201F
	R676		RS1/16S6801F
	Other Resistors		RS1/10S□□□J

OTHERS

Mark	No.	Description	Part No.
	JA652	4P MIN DIN JACK	AKP7116
	JA660,JA661	Remote Jack	RKN1004
	JA651	2P PIN JACK	VKB1123
	CN603	7P FFC CONNECTOR	VKN1299
	CN602	16P FFC CONNECTOR	VKN1308
	CN601	28P FFC CONNECTOR	VKN1320
	JA653	3 BNC CONNECTOR	VKN1558
	503	SCREW PLATE	VNE1948
	KN501,KN502	EARTHMETAL FITTING	VNF1084

FLOUT ASSY

OTHERS

Mark	No.	Description	Part No.
		PC BOARD (FLOUT)	VNP1752

N FLKB ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC102		BA6195FP
	IC101		PE5047A
	IC106		PST9130N
	IC105,IC107		PST9145N
	IC103		TC7SET08F
	Q114		2SC2412K
⚠	Q109,Q110		2SD1858X
	Q106		2SK2033
	Q108,Q112		DTA124EK
	Q105		DTA143EK
	Q101-Q103		DTC124EK
⚠	D108,D109		1SR154-400
	D103,D104		1SS355
	D101,D102,D105		SLR-343VC(NPQ)

COILS AND FILTERS

Mark	No.	Description	Part No.
	F171,F172,F174		DTF1070
	L101,L102		LCTA100J3225
	L103,L104		LCTA1R0J3225

SWITCH ADN RELAY

Mark	No.	Description	Part No.
	S101-S103		ASG7013
	RY101,RY102		VSR1015

CAPACITORS

Mark	No.	Description	Part No.
	C162,C164		CCSQCH102J50
	C131-C133		CCSQCH471J50
	C101,C102,C107-C109,C130		CCSRCH102J50
	C163		CCSRCH102J50
	C165-C167		CCSRCH150J50
	C155-C157		CEAT101M16
	C154		CEAT470M50
	C113		CEV220M16
	C135		CEV470M6R3
	C119-C121,C128,C151-C153		CKSQYF105Z16
	C110,C116,C122,C124,C127		CKSRYB103K50
	C112		CKSRYF104Z16
	C103,C105,C111,C117,C118		CKSRYF105Z10
	C123,C126,C136,C160,C161		CKSRYF105Z10
	C140,C141		CKSRYF223Z50
	C104,C106,C129	(68μF/6.3V)	VCH1188

RESISTORS

Mark	No.	Description	Part No.
	R492-R494		RA15T473J
	R491		RA8T473J
	R173,R182		RS1/10S0R0J
	R106,R142,R179,R180		RS1/10S103J
	R105		RS1/10S302J
	R141,R147,R148,R153-R155		RS1/10S330J
	R163,R164		RS1/10S330J

Mark	No.	Description	Part No.
	R136,R137,R160,R161		RS1/10S331J
	R178,R181		RS1/10S392J
	R185		RS1/10S472J
	R145		RS1/16S1503F
	R138,R146,R152,R168		RS1/16S3003F
		Other Resistors	RS1/16S□□□J

OTHERS

Mark	No.	Description	Part No.
	CN101	FFC CONNECTOR 08P	52492-0820
	CN103	FFC CONNECTOR 13P	52492-1320
	101	REMOTE RECEIVER UNIT	GP1U28X
	V101	FL TUBE	VAW1048
	CN102	19P FF CONNECTOR	VKN1311
	X101	CERAMIC RESONATOR(5MHz)	VSS1104

O PLSB ASSY

SWITCHES

Mark	No.	Description	Part No.
	S301-S305		ASG7013

CAPACITORS

Mark	No.	Description	Part No.
	C302,C303		CCSQCH331J50
	C301		CKSQYF104Z25

RESISTORS

Mark	No.	Description	Part No.
		Other Resistors	RS1/16S□□□J

OTHERS

Mark	No.	Description	Part No.
	CN303	FFC CONNECTOR 08P	52492-0820
	CN304	KR CONNECTOR	S3B-PH-K-S

P DRMB ASSY

CAPACITORS

Mark	No.	Description	Part No.
	C351		CKSQYB103K50

Q DRSB ASSY

SWITCH

Mark	No.	Description	Part No.
	S341,S342		DSG1017

RESISTORS

Mark	No.	Description	Part No.
	R341		RS1/10S183J

R LEDB ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q331		DTC124EK
	D331		LNG989CNBW
	D332		UDZS6.2B

CAPACITORS

Mark	No.	Description	Part No.
	C332		CCSQCH471J50
	C331		CKSQYB103K50

RESISTORS

Mark	No.	Description	Part No.
	R331		RS1/10S102J
	R332		RS1/10S681J

OTHERS

Mark	No.	Description	Part No.
	CN331	KR CONNECTOR	B3B-PH-K-S

S SYPS ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC304,IC314,IC304 (250mA)		AEK7002
⚠	IC303 (400mA)		AEK7004
⚠	IC102,IC332 (500mA)		AEK7005
⚠	IC101,IC103,IC301(630mA)		AEK7006
⚠	IC204,IC322 (800mA)		AEK7008
⚠	IC201,IC302 (1A)		AEK7009
⚠	IC104,IC202,IC203 (1.25A)		AEK7010
⚠	IC216 (2A)		AEK7013
⚠	IC106,IC206,IC306,IC307 (7A)		AEK7021
⚠	IC313		LM2940CT-5.0
⚠	IC111-IC113,IC312		LM2941CT/LB03
⚠	IC311		LM2991T/LB03
⚠	IC211-IC214		LP3964ET-3.3
⚠	Q304,Q331		2SB1375
	Q104,Q216,Q401		2SK2033
	Q402		DTA143EK
⚠	Q206		IRLIZ24G
	D101-D103,D201-D204		1SS355
	D301,D302,D313,D403,D413		1SS355
	D423		1SS355
	D311		MTZJ11B
	D324		MTZJ39B
	D334		MTZJ9.1A
⚠	D106,D206,D306		RBA-406B
⚠	D304,D314,D321,D331		S5688G

COILS AND FILTERS

Mark	No.	Description	Part No.
	L304,L314,L324,L334		LAU1R0J

RELAY

Mark	No.	Description	Part No.
	RY401		VSR1008

CAPACITORS

Mark	No.	Description	Part No.
	C324		CEHAT100M50
	C304,C314		CEHAT102M50
	C316,C317		CEHAT1R0M50
	C101-C103,C161,C201-C204		CEHAZA101M16
	C301,C322,C334		CEHAZA101M16
	C323		CEHAZA101M6R3
	C302,C303		CEHAZA470M35
	C121-C123,C173,C221-C224		CEHAZA471M6R3
	C321		CEHAZA471M6R3
	C106,C206,C306,C307		CKPUYF223Z25
	C151-C153,C352,C361		CKSQYF104Z25
	C406,C407		CKSQYF104Z25
	C111-C113,C131-C133,C141		CKSQYF105Z16
	C143,C171,C174,C211-C214		CKSQYF105Z16
	C231-C234,C311,C331-C333		CKSQYF105Z16
	C341,C342,C351,C364		CKSQYF105Z16
	C344,C354		CKSQYF223Z50
	C312,C313		CKSQYF224Z25
	C116	(22000µF/16V)	VCH1204
	C216	(33000µF/10V)	VCH1205
	C327	(10000µF/25V)	VCH1206
	C326	(18000µF/25V)	VCH1209

RESISTORS

Mark	No.	Description	Part No.
	R314,R361		RD1/4PU102J
	R324		RD1/4PU103J
	R371		RD1/4PU221J
	R304		RD1/4PU472J
	R306		RD1/4PU8R2J
	R121-R123		RN1/10SE1001D
	R312		RN1/10SE1002D
	R321,R322		RN1/10SE1201D
	R111-R113		RN1/10SE3001D
	R311		RN1/10SE3901D
	R131,R331		RS2LMF1R0J
	VR206 (1kΩ)		VCP1151
	Other Resistors		RS1/10S□□□J

OTHERS

Mark	No.	Description	Part No.
		HEAT SINK	ANH-575
	CN405	KR CONNECTOR 3P	B3B-PH-K-S
	CN406	3P Top Post	B3P-VH
	CN401	7P-VH CONNECTOR	B7P-VH
	CN402	KR CONNECTOR	B8B-PH-K-S
	CN403	KR CONNECTOR	B10B-PH-K-S
	CN404	FFC CONNECTOR 13P	HLEM13S-1
		IC HEAT SINK	VNE1921
	KN401	EARTHMETAL FITTING	VNF1084
		HEAT SINK	VNH1059
		HEAT SINK	VNH1060
		HEAT SINK	VNH1061
		HEAT SINK	VNH1062
		HEAT SINK	VNH1063
		Screw	BBZ30P060FCC
		Screw	BBZ30P080FCC
		Screw	PMB30080FCU

T FANB ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC701		BA10393F
	Q701		2SB1238X

COILS AND FILTERS

Mark	No.	Description	Part No.
	F733		DTF1070

CAPACITORS

Mark	No.	Description	Part No.
	C703,C704,C734		CEHAZA101M6R3
	C701,C702,C714		CKSQYF104Z25
	C724		CKSQYF105Z16

RESISTORS

Mark	No.	Description	Part No.
	R701,R702,R712		RN1/10SE1201D
	R703		RN1/10SE3302D
	R713,R723		RS1/10S222J

OTHERS

Mark	No.	Description	Part No.
	TH701	Thermistor	ERT-G1AHJ502
	CN701	KR CONNECTOR	S2B-PH-K-S
	CN702	KR CONNECTOR	S3B-PH-K-S

U LSFB ASSY

COILS AND FILTERS

Mark	No.	Description	Part No.
⚠	F21	EMC Filter	ATF7023

SWITCH

Mark	No.	Description	Part No.
⚠	S1		PSA1004

CAPACITORS

Mark	No.	Description	Part No.
⚠	C11,C21 (0.01μF/AC250V)		ACE7014
⚠	C12,C13 (10000pF/AC250V)		ACG7033

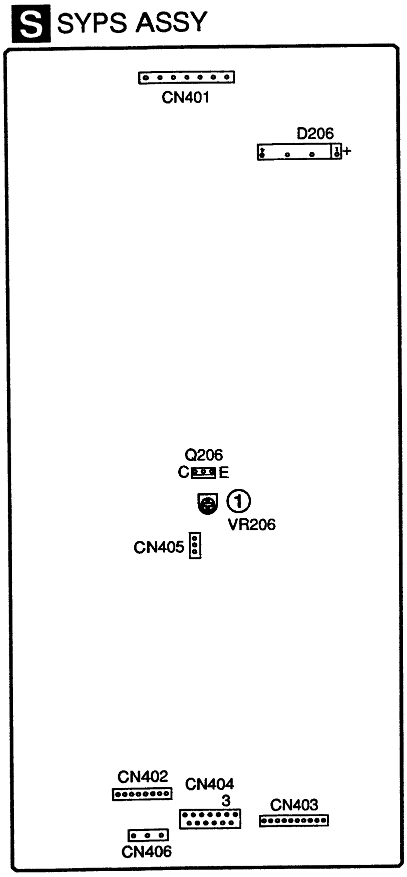
OTHERS

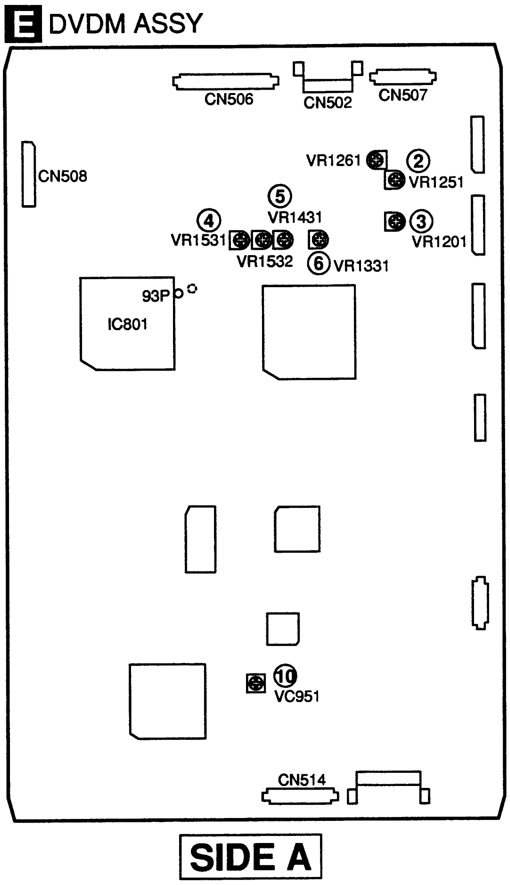
Mark	No.	Description	Part No.
	H1-H4	FUSE CLIP	AKR1004
⚠	CN11	2P-VHCONNECTOR(RED)	B2P3-VH-R
⚠	CN21	2P-VHCONNECTOR(Yellow)	B2P3-VH-Y
		PCB BINDER	VEF1040
⚠		PW TERMINAL	VKC-019
	KN1	EARTH METAL FITTING	VNF1084

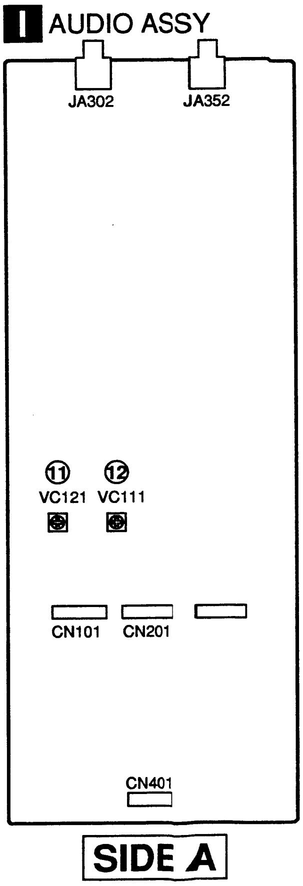
6. ADJUSTMENT

6.1 ADJUSTMENT ITEMS AND LOCATION

■ Adjustment Points (PCB Part)


S SYPS ASSY
CN401
D206
Q206
C E
①
VR206
CN405
CN402
CN404
3
CN403
CN406


E DVDM ASSY
CN506
CN502
CN507
CN508
VR1261
②
VR1251
⑤
VR1431
④
VR1531
③
VR1201
VR1532
⑥
VR1331
93P
IC801
⑩
VC951
CN514
SIDE A

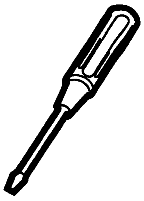
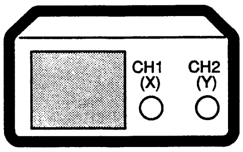
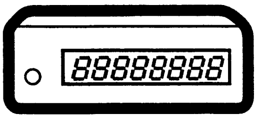
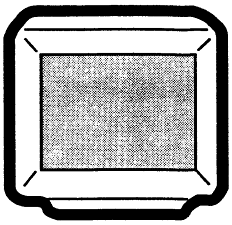
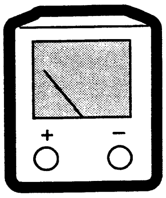

I AUDIO ASSY
JA302
JA352
⑪
⑫
VC121
VC111
CN101
CN201
CN401
SIDE A

■ Adjustment Items

[Electrical Part]

① V+5U Adjustment
② Y Level Adjustment
③ C Level Adjustment
④ Color-difference Y Level Adjustment
⑤ Color-difference Cb Level Adjustment
⑥ Color-difference Cr Level Adjustment
⑦ Progressive Color-difference Y Level Confirmation
⑧ Progressive Color-difference Cb Level Confirmation
⑨ Progressive Color-difference Cr Level Confirmation
⑩ 27MHz Clock Adjustment
⑪ 36MHz Clock Adjustment
⑫ 33MHz Clock Adjustment

6.2 JIGS AND MEASURING INSTRUMENTS

 ⊖ Screwdriver (small)	 Dual-trace oscilloscope (with delay) Frequency band ≧ 40MHz	 Frequency counter Display digit ≧ 8-digit	 TV monitor
 Voltmeter			

6.3 NECESSARY ADJUSTMENT POINTS

When

Adjustment Points

■ Exchange PCB Assy

Exchange power supply board
SYPS ASSY

Mechanical point ______________

Electric point ______________

Note : ① is adjusted already.

Exchange mother board
DVDM ASSY

Mechanical point ______________

Electric point ______________

Note : ②, ③, ④, ⑤, ⑥, ⑦, ⑧, ⑨ and ⑩ are adjusted already.

Exchange AUDIO board
AUDIO ASSY

Mechanical point ______________

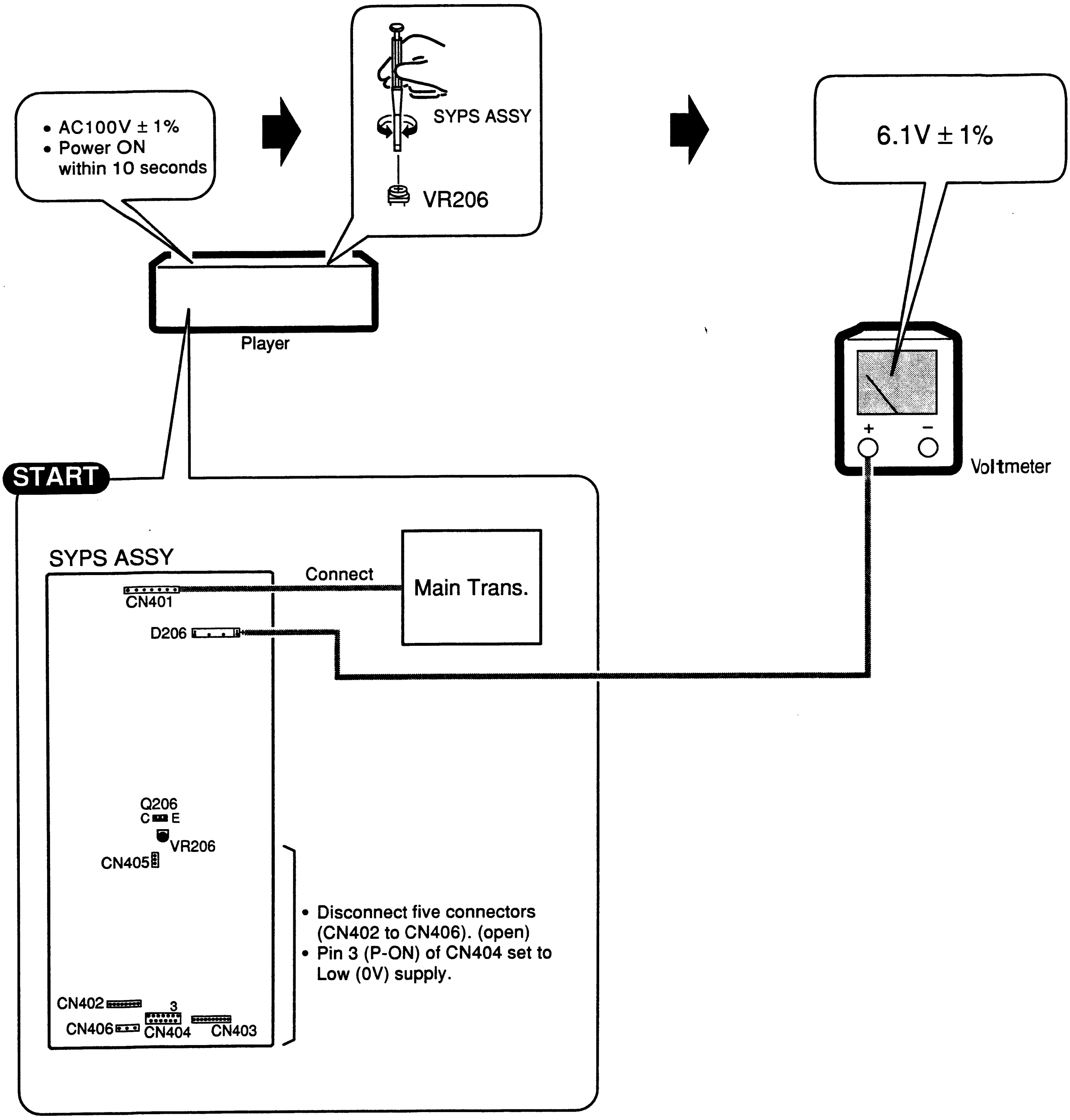
Electric point ______________

Note : ⑪ and ⑫ are adjusted already.

6.4 ELECTRICAL ADJUSTMENT

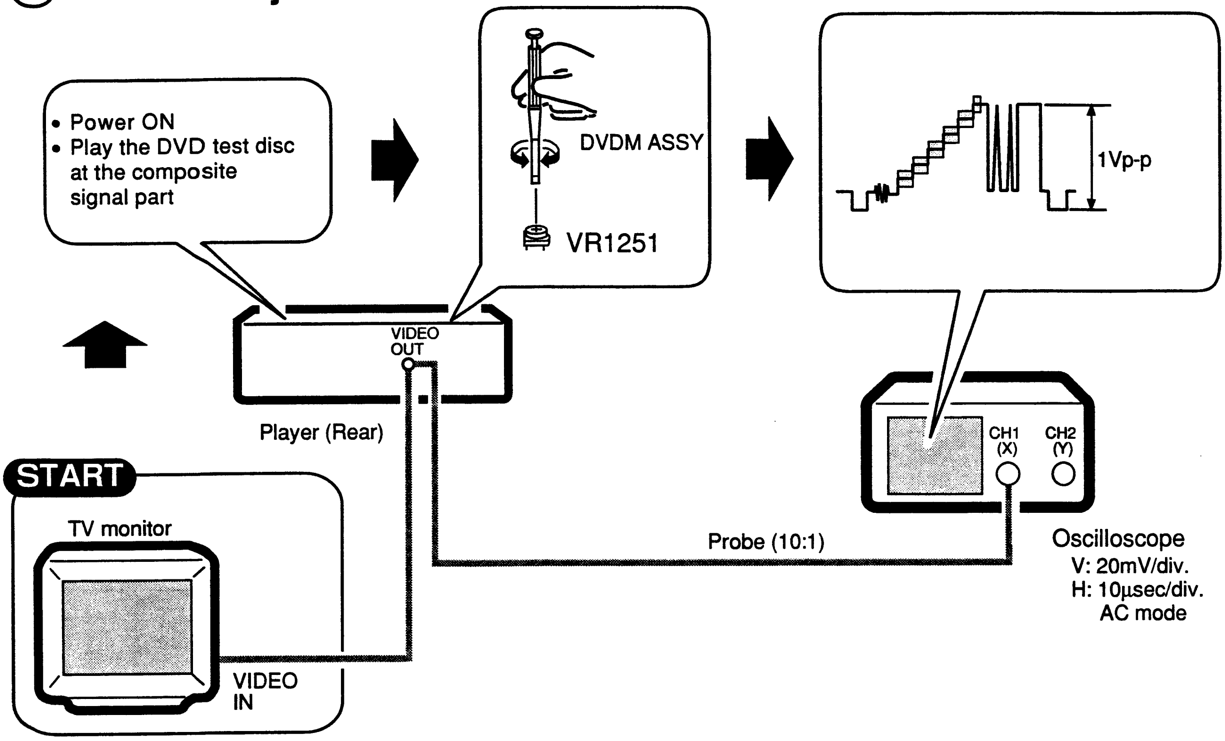
① V + 5U Adjustment

- Perform this adjustment for less than 10 seconds after turns the power on.
- When this adjustment did not complete for less than 10 senconds, adjust it once again after turns the power off once and Q206 cooled down.

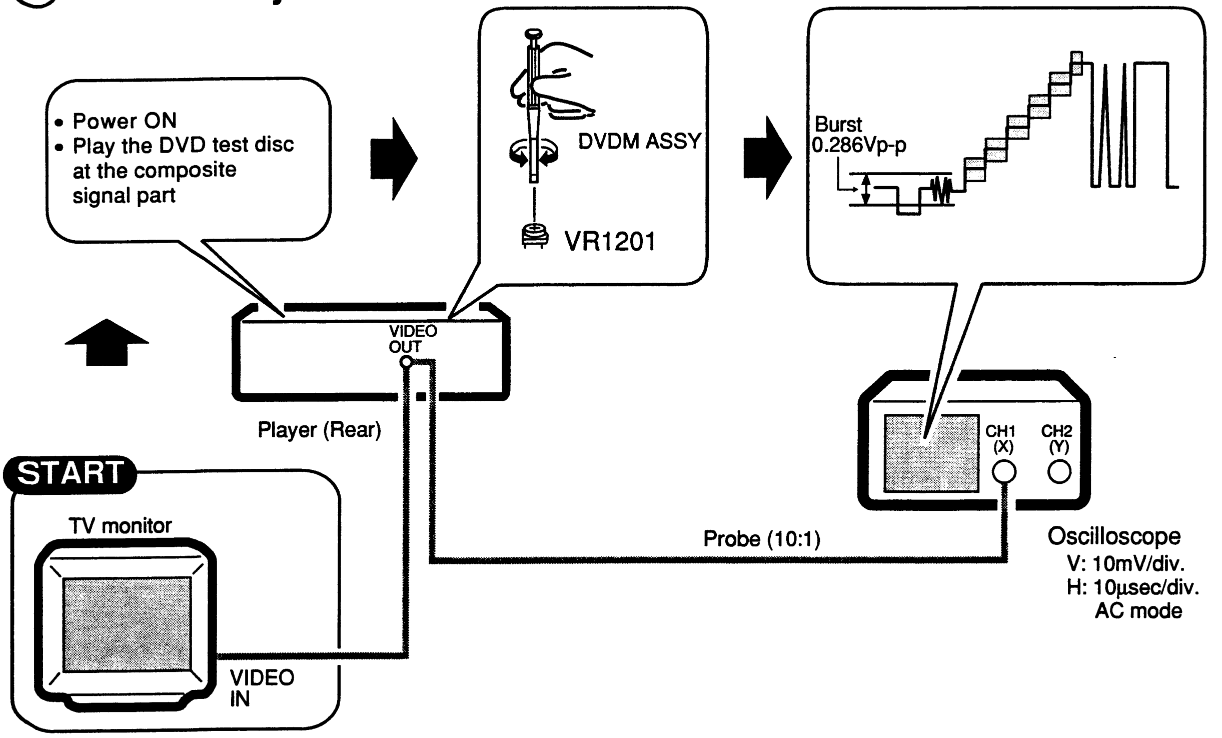

• AC100V ± 1%
• Power ON within 10 seconds
SYPS ASSY
VR206
6.1V ± 1%
Player
Voltmeter
+
−
START
SYPS ASSY
Connect
Main Trans.
CN401
D206
Q206
C E
VR206
CN405
CN402
3
CN406
CN404
CN403

- Disconnect five connectors (CN402 to CN406). (open)
- Pin 3 (P-ON) of CN404 set to Low (0V) supply.

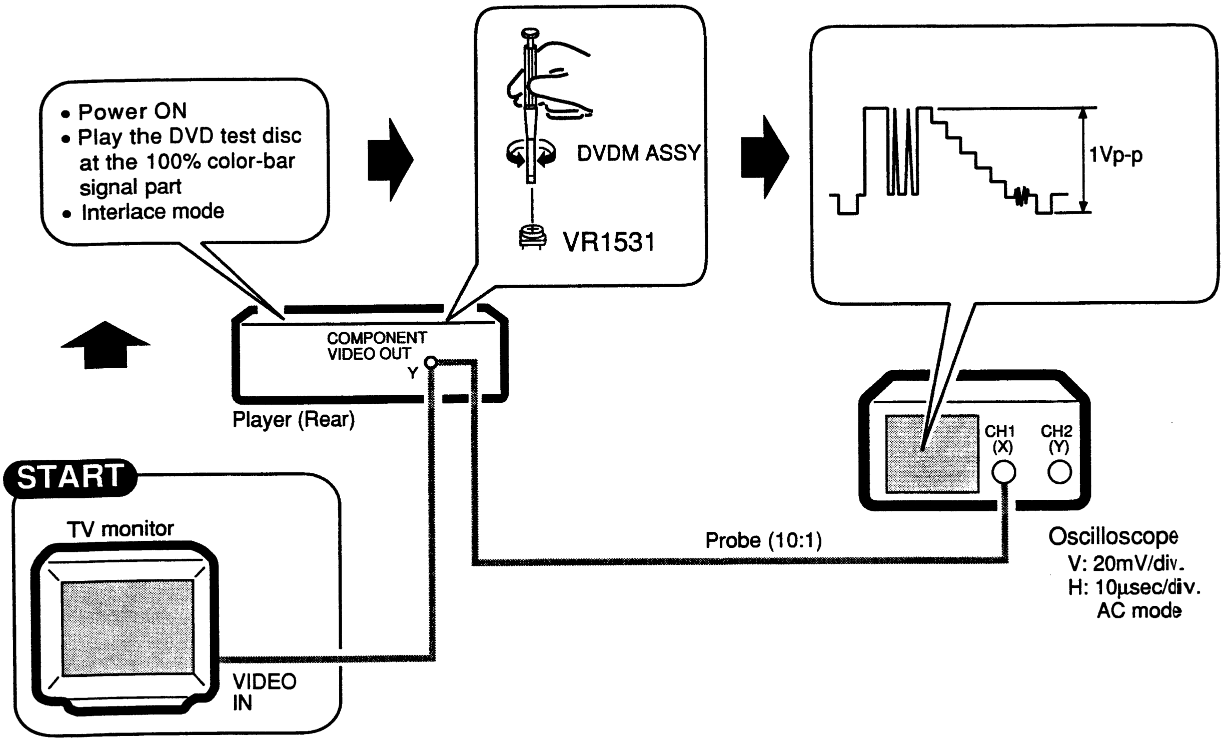
② Y Level Adjustment


• Power ON
• Play the DVD test disc at the composite signal part
DVDM ASSY
VR1251
1Vp-p
VIDEO OUT
Player (Rear)
CH1 (X)
CH2 (Y)
START
TV monitor
Probe (10:1)
Oscilloscope
V: 20mV/div.
H: 10µsec/div.
AC mode
VIDEO IN

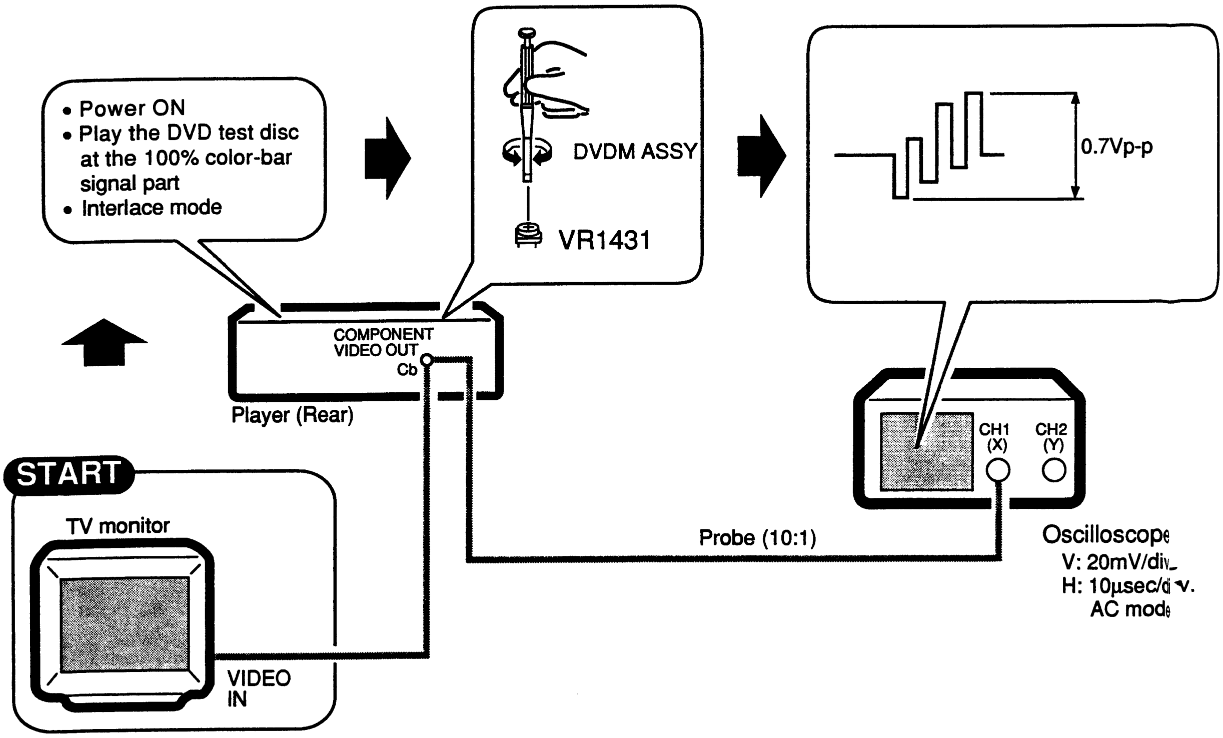
③ C Level Adjustment


• Power ON
• Play the DVD test disc at the composite signal part
DVDM ASSY
VR1201
Burst
0.286Vp-p
VIDEO OUT
Player (Rear)
CH1 (X)
CH2 (Y)
START
TV monitor
Probe (10:1)
Oscilloscope
V: 10mV/div.
H: 10µsec/div.
AC mode
VIDEO IN

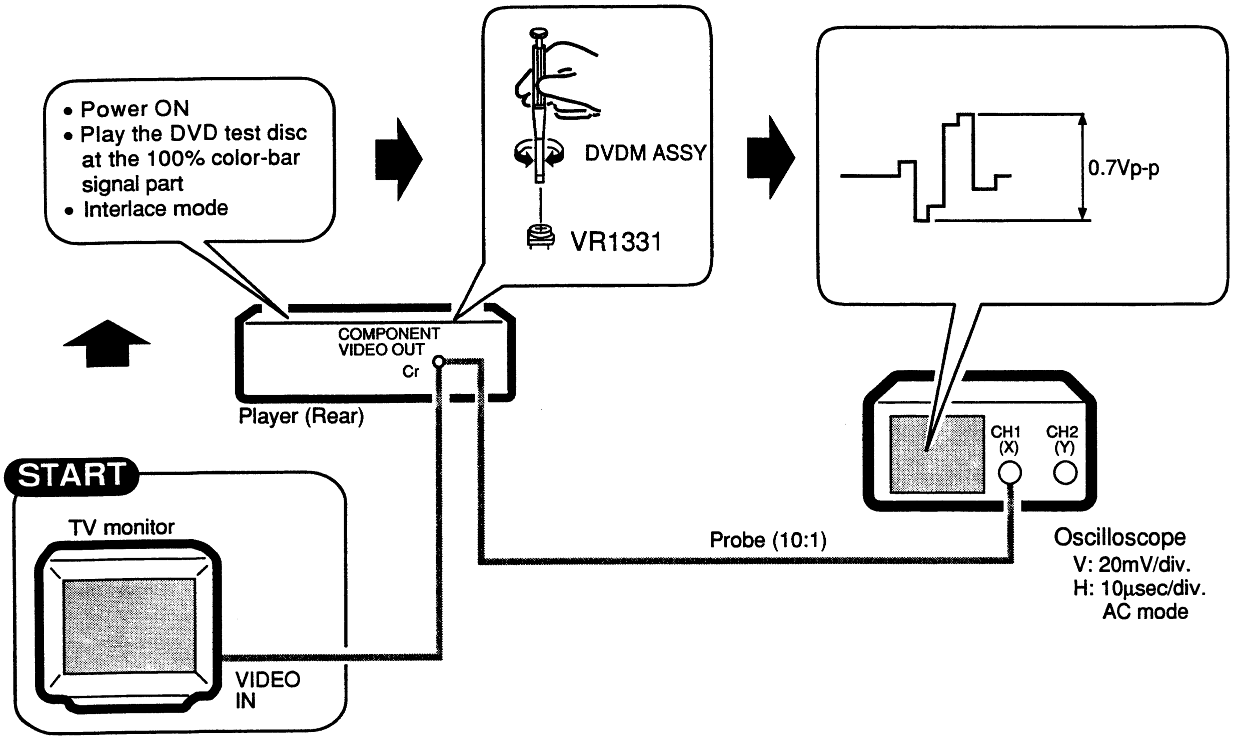
④ Color-difference Y Level Adjustment


• Power ON
• Play the DVD test disc at the 100% color-bar signal part
• Interlace mode
DVDM ASSY
VR1531
1Vp-p
COMPONENT VIDEO OUT
Y
Player (Rear)
START
TV monitor
VIDEO IN
CH1 (X)
CH2 (Y)
Probe (10:1)
Oscilloscope
V: 20mV/div.
H: 10µsec/div.
AC mode

⑤ Color-difference Cb Level Adjustment


• Power ON
• Play the DVD test disc at the 100% color-bar signal part
• Interlace mode
DVDM ASSY
VR1431
0.7Vp-p
COMPONENT VIDEO OUT
Cb
Player (Rear)
START
TV monitor
VIDEO IN
CH1 (X)
CH2 (Y)
Probe (10:1)
Oscilloscope
V: 20mV/div.
H: 10µsec/div.
AC mode

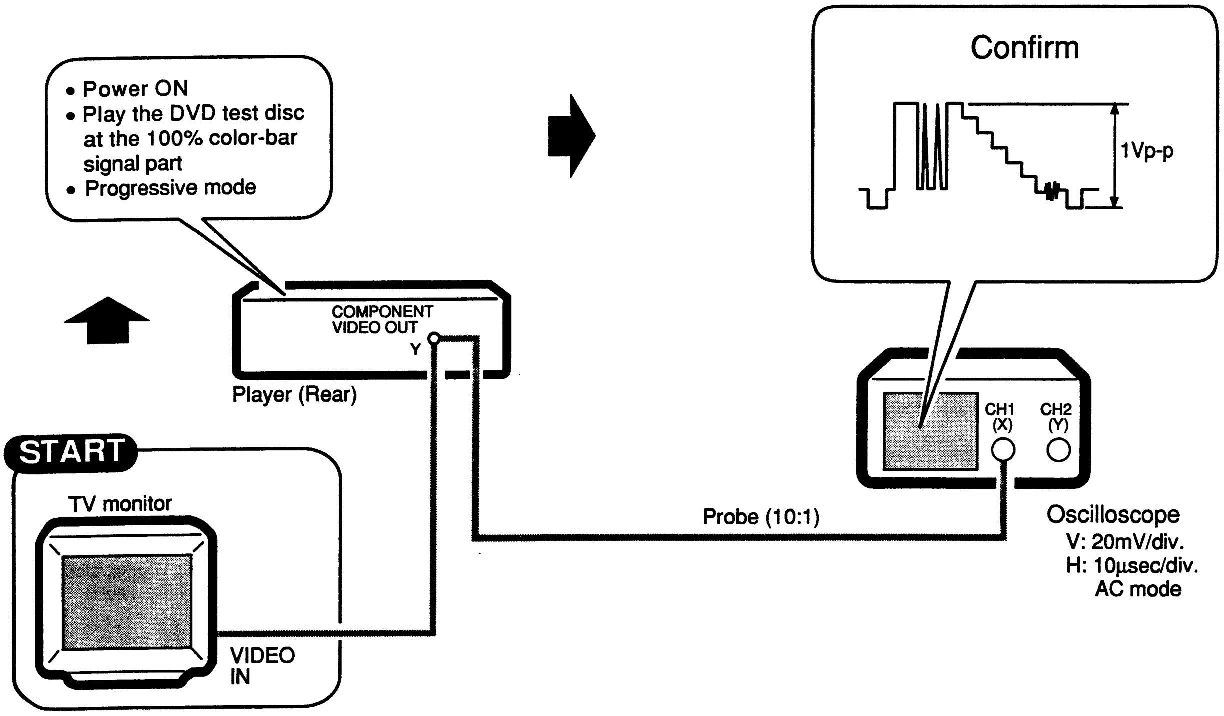
⑥ Color-difference Cr Level Adjustment



- Power ON
- Play the DVD test disc at the 100% color-bar signal part
- Interlace mode

DVDM ASSY
VR1331
0.7Vp-p
COMPONENT VIDEO OUT
Cr
Player (Rear)
START
TV monitor
VIDEO IN
Probe (10:1)
CH1 (X)
CH2 (Y)
Oscilloscope
V: 20mV/div.
H: 10μsec/div.
AC mode

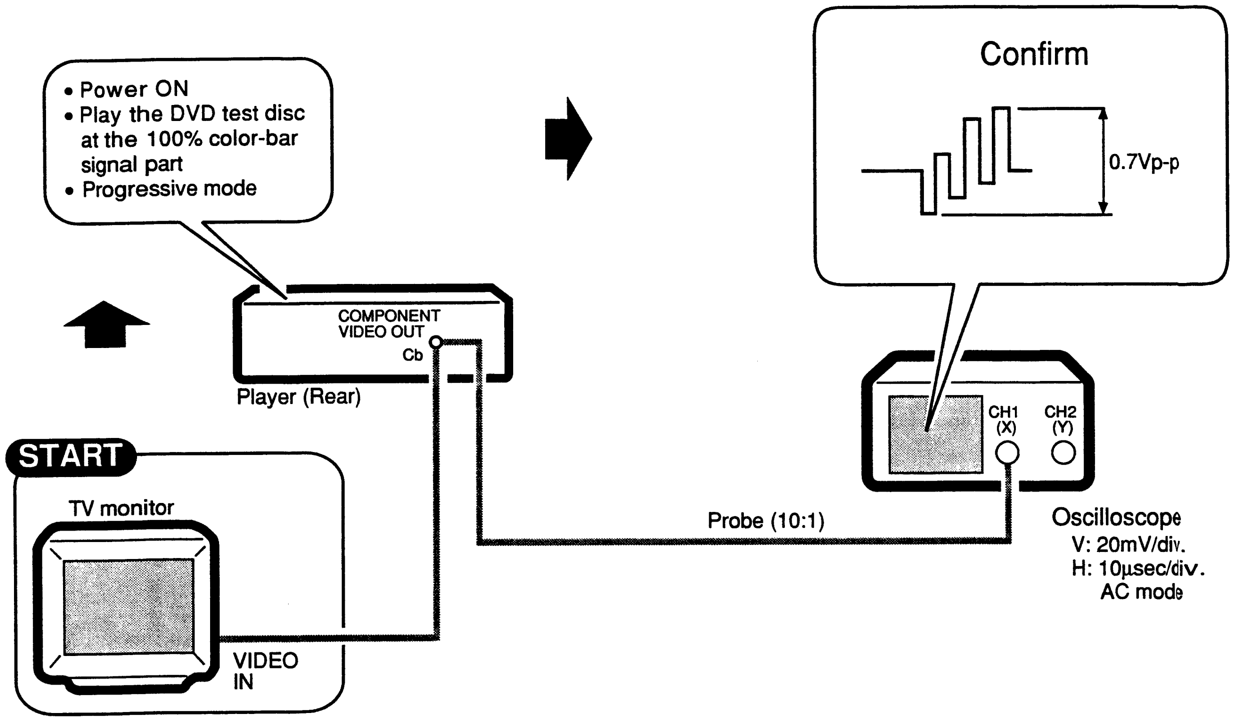
⑦ Progressive Color-difference Y Level Confirmation



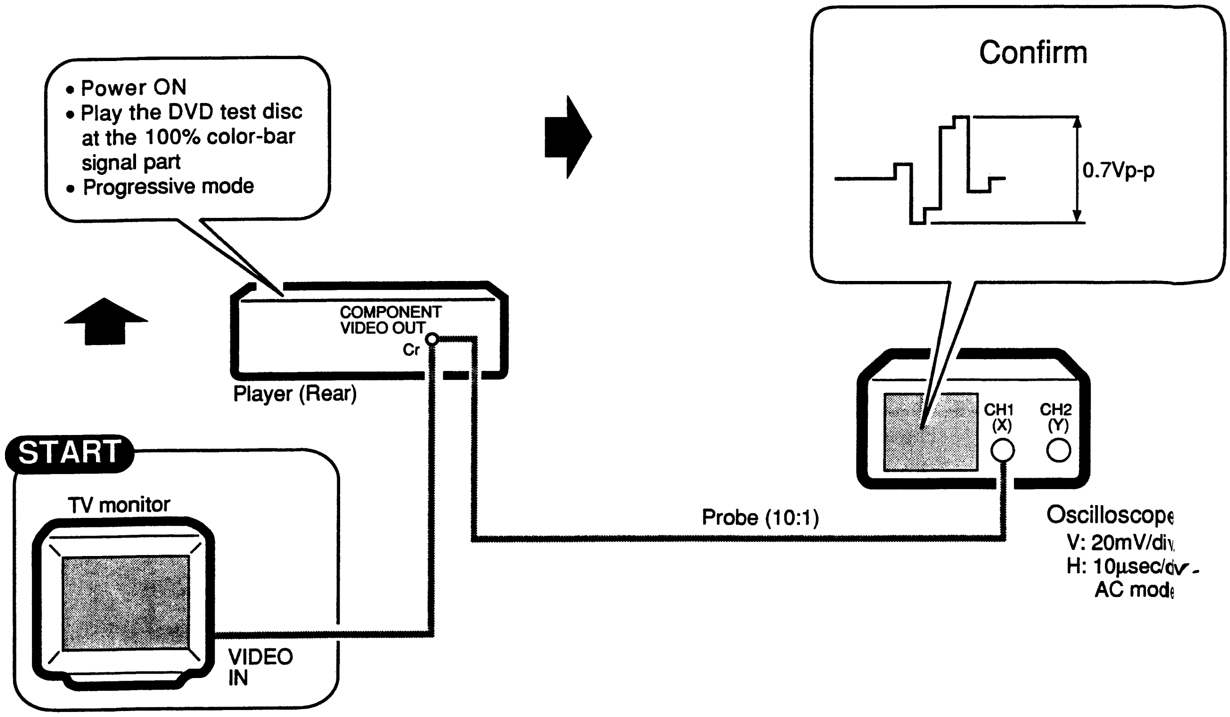
- Power ON
- Play the DVD test disc at the 100% color-bar signal part
- Progressive mode

Confirm
1Vp-p
COMPONENT VIDEO OUT
Y
Player (Rear)
START
TV monitor
VIDEO IN
Probe (10:1)
CH1 (X)
CH2 (Y)
Oscilloscope
V: 20mV/div.
H: 10μsec/div.
AC mode

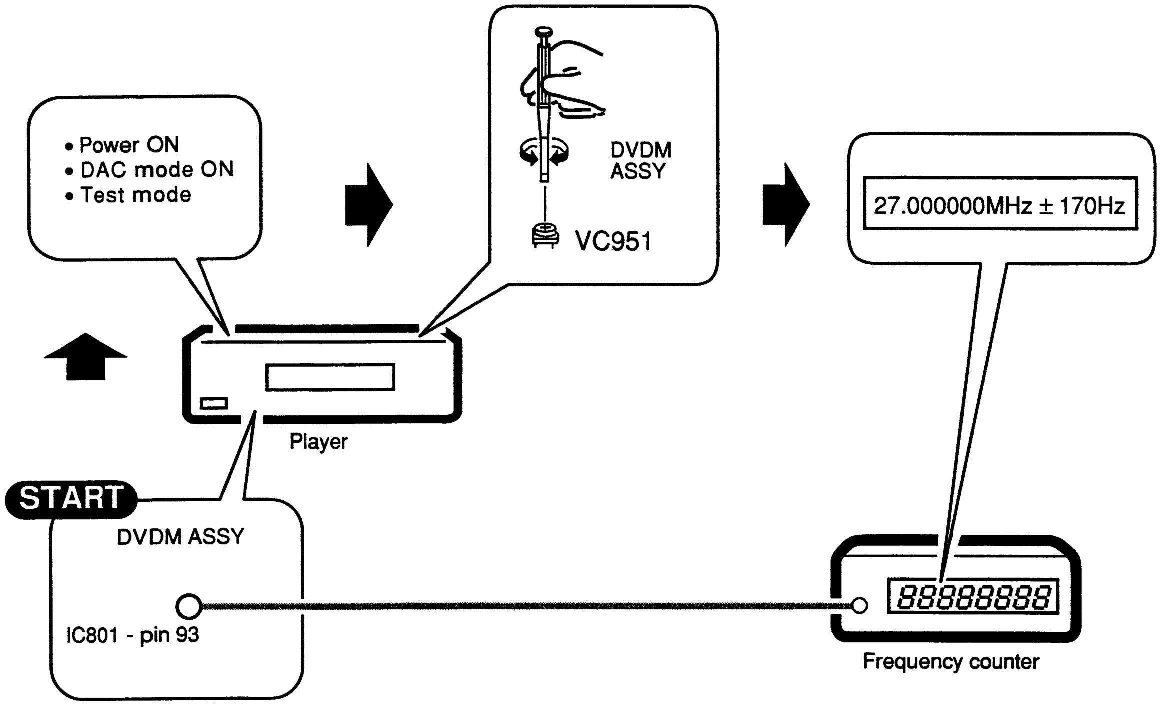
⑧ Progressive Color-difference Cb Level Confirmation


• Power ON
• Play the DVD test disc at the 100% color-bar signal part
• Progressive mode
Confirm
0.7Vp-p
COMPONENT VIDEO OUT
Cb
Player (Rear)
START
TV monitor
VIDEO IN
Probe (10:1)
CH1 (X)
CH2 (Y)
Oscilloscope
V: 20mV/div.
H: 10µsec/div.
AC mode

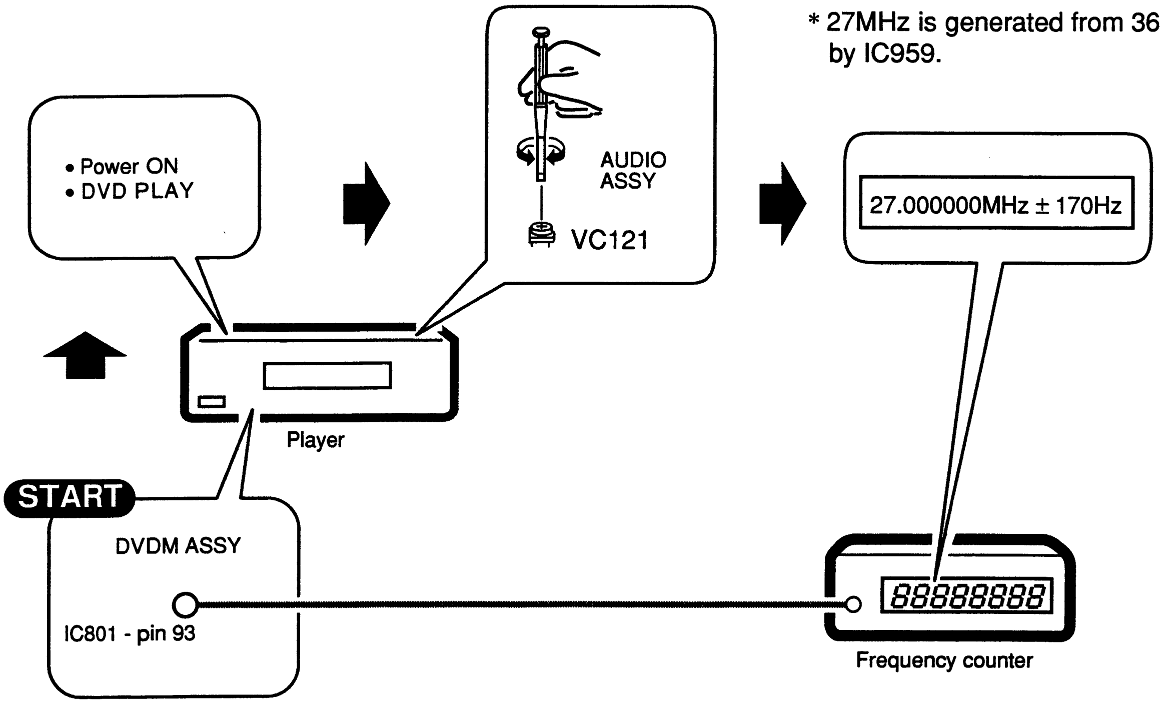
⑨ Progressive Color-difference Cr Level Confirmation


• Power ON
• Play the DVD test disc at the 100% color-bar signal part
• Progressive mode
Confirm
0.7Vp-p
COMPONENT VIDEO OUT
Cr
Player (Rear)
START
TV monitor
VIDEO IN
Probe (10:1)
CH1 (X)
CH2 (Y)
Oscilloscope
V: 20mV/div.
H: 10µsec/div.
AC mode

⑩ 27MHz Clock Adjustment

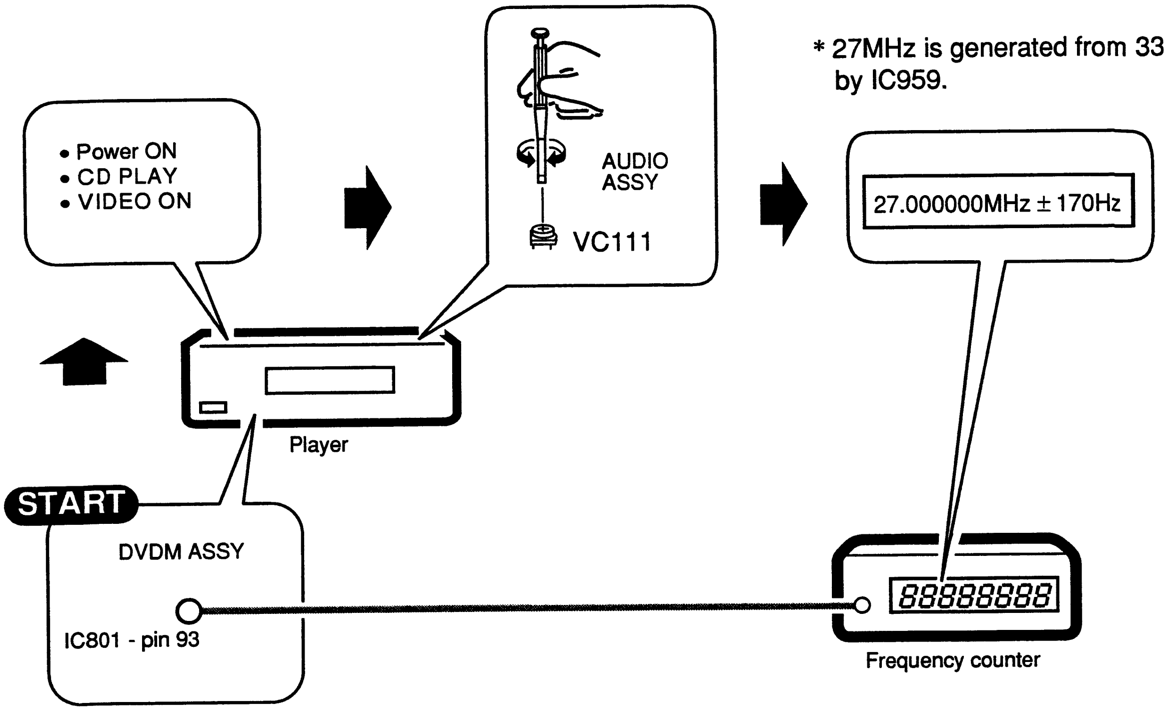

• Power ON
• DAC mode ON
• Test mode
DVDM ASSY
VC951
27.000000MHz ± 170Hz
Player
START
DVDM ASSY
IC801 - pin 93
88888888
Frequency counter

⑪ 36MHz Clock Adjustment


• Power ON
• DVD PLAY
AUDIO ASSY
VC121
27.000000MHz ± 170Hz
Player
START
DVDM ASSY
IC801 - pin 93
88888888
Frequency counter

* 27MHz is generated from 36M Hz by IC959.

⑫ 33MHz Clock Adjustment


• Power ON
• CD PLAY
• VIDEO ON
AUDIO ASSY
VC111
27.000000MHz ± 170Hz
Player
START
DVDM ASSY
IC801 - pin 93
88888888
Frequency counter

* 27MHz is generated from 33MHz by IC959.

7. GENERAL INFORMATION

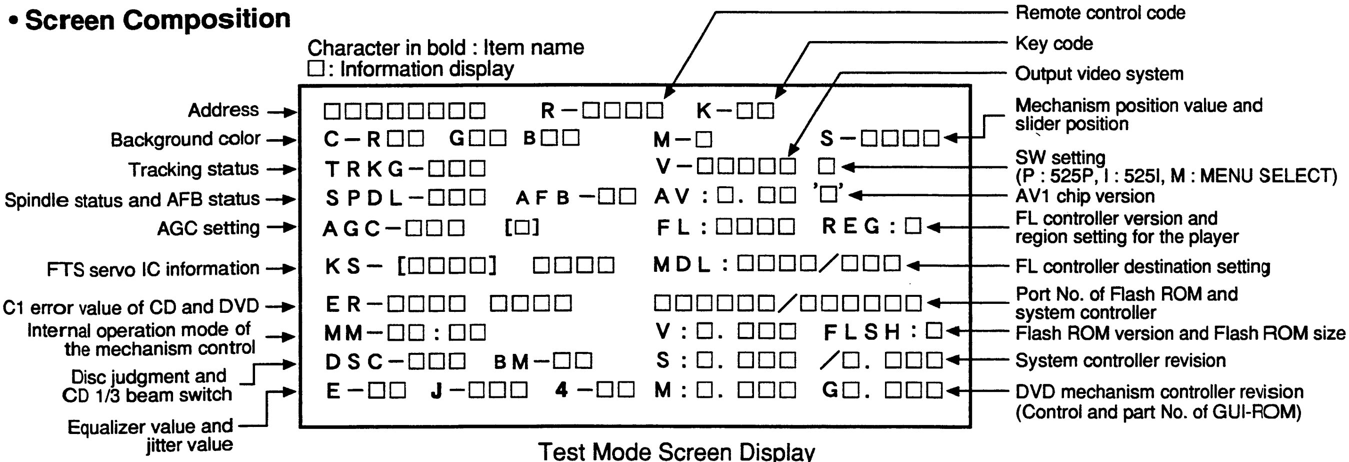
7.1 DIAGNOSIS

7.1.1 TEST MODE SCREEN DISPLAY

When the test mode is entered, press the ESC button and the TEST button in order of the test mode remote control unit (GGF1067).

Consecutive double-OSD display is supported during test mode. The screen is composed 10 lines with a maximum of 32 characters per line. It can't be used with the debugging display mode together.

• Screen Composition


Character in bold : Item name
□: Information display
Address
Background color
Tracking status
Spindle status and AFB status
AGC setting
FTS servo IC information
C1 error value of CD and DVD
Internal operation mode of the mechanism control
Disc judgment and CD 1/3 beam switch
Equalizer value and jitter value
□□□□□□□□ R−□□□□ K−□□
C−R□□ G□□ B□□ M−□ S−□□□□
TRKG−□□□ V−□□□□□ □
SPDL−□□□ AFB −□□ AV : □. □□ '□'
AGC−□□□ [□] FL : □□□□ REG : □
KS− [□□□□] □□□□ MDL : □□□□/□□□
ER−□□□□ □□□□ □□□□□□/□□□□□□
MM−□□ : □□ V : □. □□□ FLSH : □
DSC−□□□ BM−□□ S : □. □□□ /□. □□□
E−□□ J−□□□ 4−□□ M : □. □□□ G□. □□□
Remote control code
Key code
Output video system
Mechanism position value and slider position
SW setting (P : 525P, I : 525I, M : MENU SELECT)
AV1 chip version
FL controller version and region setting for the player
FL controller destination setting
Port No. of Flash ROM and system controller
Flash ROM version and Flash ROM size
System controller revision
DVD mechanism controller revision (Control and part No. of GUI-ROM)

Test Mode Screen Display
(First Screen Display)

Caution :
The first screen and second screen switch by pressing [DISPLAY] key of the remote control unit.
It is only a version display part on the lower right of the screen those contents of display change.
ATB : ON/OFF information display and AGC manual setting display deleted with the second generation.
The displays of Tilt error value, Tilt servo status and pickup DVD/CLD display deleted with the third generation becomes LD part is deleted.

• Description of Each Item on the Display

(1) Address indication

The address being traced is displayed in number.

DVD : ID indication (hexadecimal number, 8 digits)	[* * * * * * * *]
CD : A-TIME (min. sec.)	[0 0 0 0 * * * *]

(Note : For DVDs, decimal-number indication is possible.)

(2) Code indication of the remote control unit [R − * * * *]

The code for the key pressed on the remote control unit, which is received by the FL controller, is displayed while the key is pressed. In the case of the double code, the second code will be displayed.

(3) Key code indication for the main unit [K − * *]

The code for the key pressed on the main unit, which is received by the system controller, is displayed while the key is pressed.

(4) Background color indication [C − R* * G* * B* *]

(5) Tracking status [TRKG − *]**

Tracking on	[ON]
Tracking off	[OFF]

(6) ① Spindle status [SPDL − * * *]

Spindle accelerator and brake, free-runnimg	[A/B]
FG servo	[FG]
Rough, velocity phase servo	[SRV]
Offset addition, rough, velocity phase servo	[O−S]

② AFB status [AFB − * *]

ON	[ON]
OFF	[OFF]

(7) Mechanism position value [M − *]

Position code	[0] to [8]

(8) Slider position [S − * * * *]

CD TOC area	[IN]
CD active area	[CD]
CDV video area	[CDV]

(9) AGC setting [AGC − * * *] [*]

AGC on	[AGC-ON]
AGC off	[AGC-OFF]
RF AGC on	[1]
RF AGC off	[0]

(10) Output video system [V – * * * * *] [*]

NTSC system	[NTSC]
PAL system	[PAL]
Auto-setting	[AUTO]
• SW setting	
525P	[P]
525I	[I]
MENU SELECT	[M]

(11) FTS servo IC information

DSP coefficient indication [KS – [* * * *] * * * *]

Displays the address (four digits) of the specified coefficient and the setting value (four digits) with [TEST] and [9] keys.

(12) Error rate indication

① C1 error value of CD [ER – C1 * * * *]

② C1 error value of DVD [ER – * * * * * * * *]

(13) Internal operation mode of mechanism controller [MM – * * : * *]

Internal mechanism mode (2 digits) and internal mechanism step (2 digits) of the mechanism controller

(14) ① Disk sensing [DSC – * * *]

The type of discs loaded is displayed.

[DVD], [CD], [CDV], [VCD], [ ]

② CD 1/3 beam switch [BM – * *]

(15) ① Equalizer value [E – * *]

② Jitter value [J – * *]

Make the jitter four times, and renew it in every one second. [4 – * *]

CD is effective only in the jitter value.

(16) Version of the AV-1 chip [AV : * . * *' *']

(17) ① Version of the FL controller [FL : * * * *]

② Region setting of the player [REG : *]

Setting value [1] to [6]

(18) Destination setting of the FL controller [MDL : * * * * / * * *]

Four charactors in the front represent the type of model :
Three charactors in the back represent the destination code.
J : /J, K : /KU, /KC, /KU/KC, R : /RAM, /RL, /RD, /LB,
WY : /WY

(19) The part number of the flash ROM and system controller [* * * * * * / * * * * * * *]

① Part number of the flash ROM <Front>
(Example) VYW1536-A = W1536A
(Example) PD6256A9 = 6256A9

② Part number of the system controller <Back>
(Example) PD3381T1 = 3381T1

(20) ① Version of the flash ROM [V : * . * * *]

② Flash ROM size [FLSH = *]

(21) Revision of the system controller [S : * . * * * / * . * *]

① Revision number of the external ROM part (flash ROM) of the system controller <Front>

② Revision of the internal ROM part of the system controller <Back>

(22) Revision of the DVD mechanism controller [M : * . * * *]

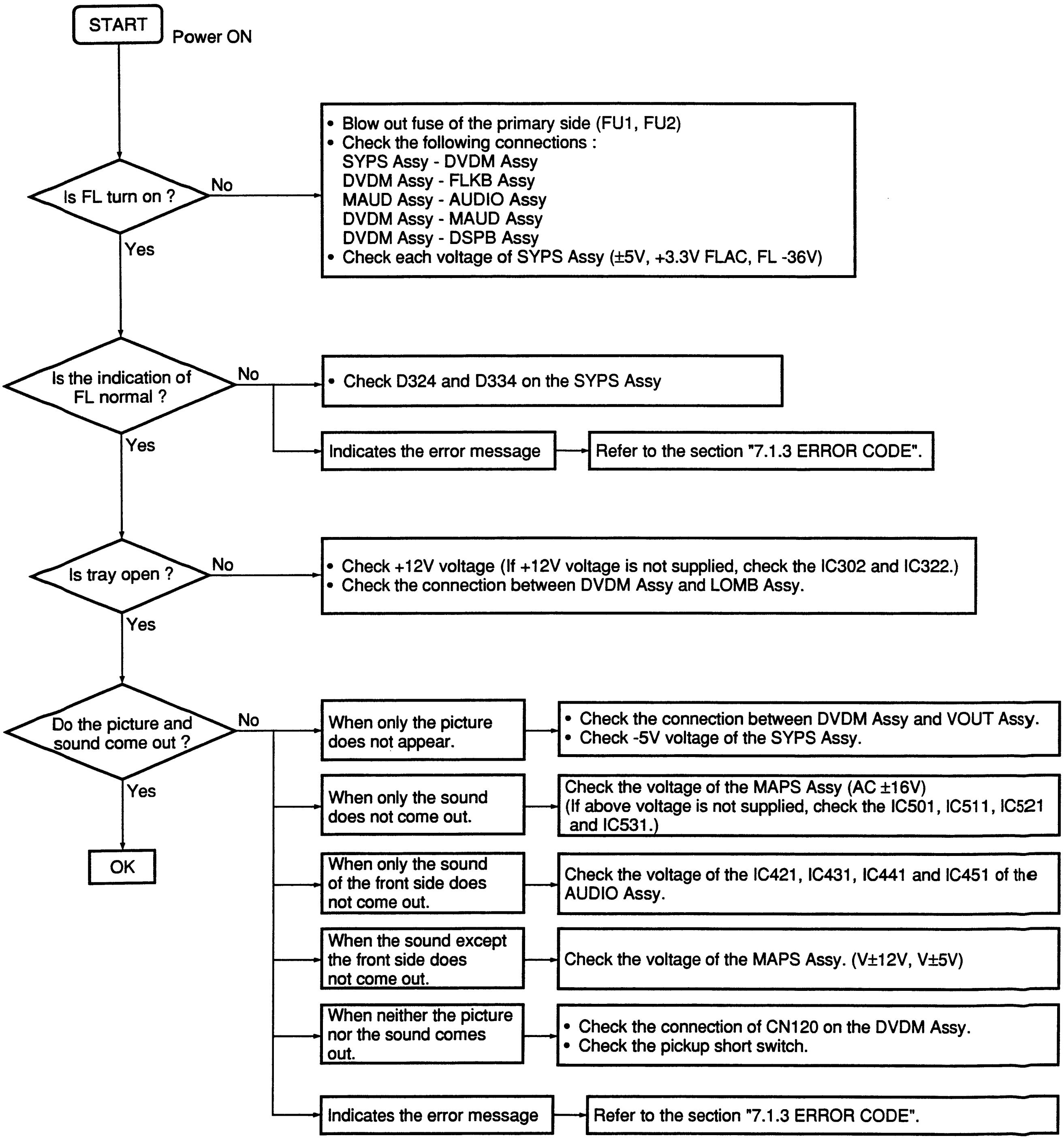
Revision number of the external ROM part (flash ROM) of the DVD mechanism controller

(23) Control and part numbers of the GUI-ROM [GUI : * * * *]

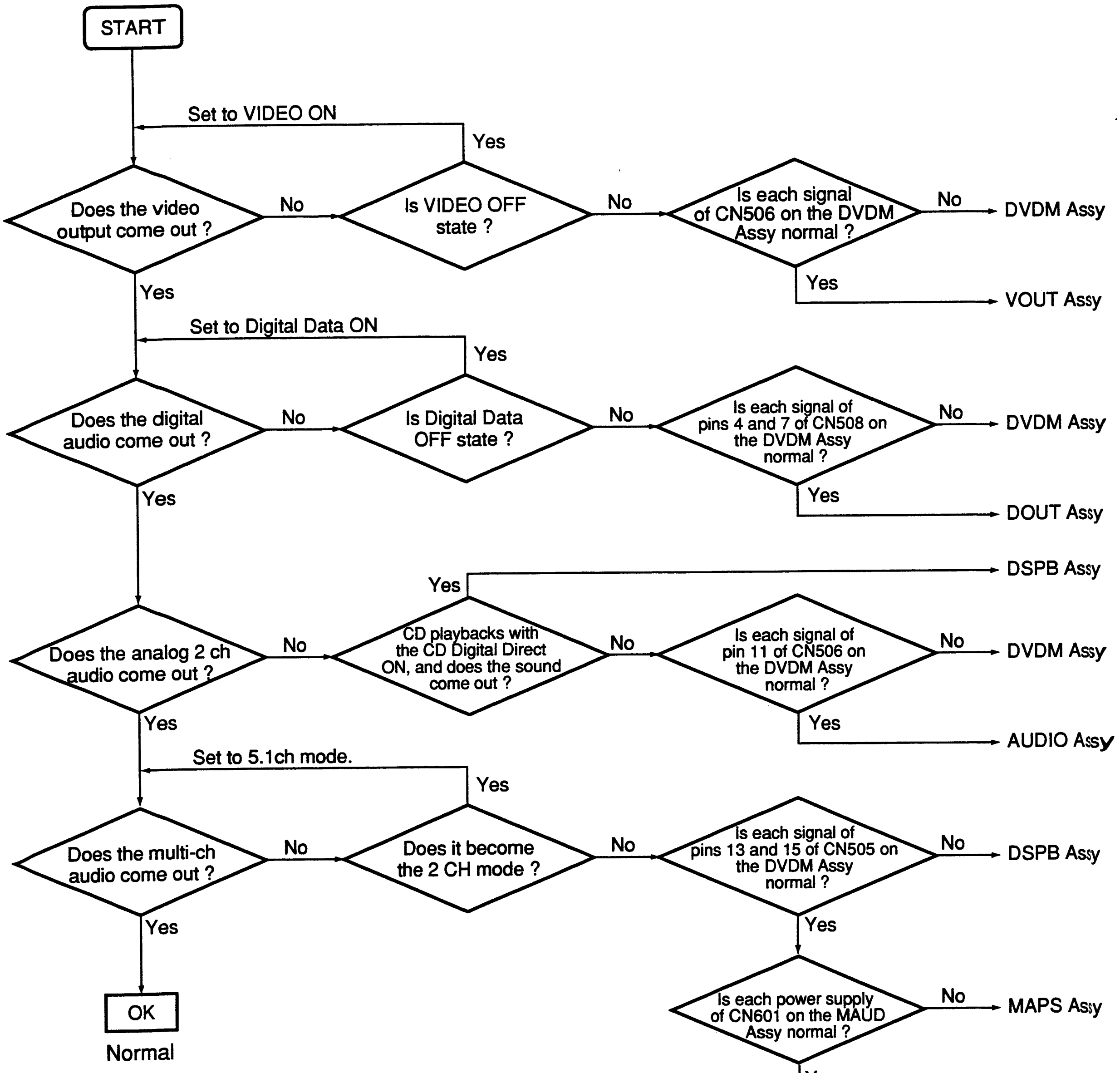
No GUI model displays as "—— / ——".

7.1.2 TROUBLE SHOOTING

- No Power ON
- FL is not turned ON
- FL indication is unusual


START
Power ON
Is FL turn on ?
No
Yes
• Blow out fuse of the primary side (FU1, FU2)
• Check the following connections :
SYPS Assy - DVDM Assy
DVDM Assy - FLKB Assy
MAUD Assy - AUDIO Assy
DVDM Assy - MAUD Assy
DVDM Assy - DSPB Assy
• Check each voltage of SYPS Assy (±5V, +3.3V FLAC, FL -36V)
Is the indication of FL normal ?
No
Yes
• Check D324 and D334 on the SYPS Assy
Indicates the error message
Refer to the section "7.1.3 ERROR CODE".
Is tray open ?
No
Yes
• Check +12V voltage (If +12V voltage is not supplied, check the IC302 and IC322.)
• Check the connection between DVDM Assy and LOMB Assy.
Do the picture and sound come out ?
No
Yes
OK
When only the picture does not appear.
• Check the connection between DVDM Assy and VOUT Assy.
• Check -5V voltage of the SYPS Assy.
When only the sound does not come out.
Check the voltage of the MAPS Assy (AC ±16V)
(If above voltage is not supplied, check the IC501, IC511, IC521 and IC531.)
When only the sound of the front side does not come out.
Check the voltage of the IC421, IC431, IC441 and IC451 of the AUDIO Assy.
When the sound except the front side does not come out.
Check the voltage of the MAPS Assy. (V±12V, V±5V)
When neither the picture nor the sound comes out.
• Check the connection of CN120 on the DVDM Assy.
• Check the pickup short switch.
Indicates the error message
Refer to the section "7.1.3 ERROR CODE".

Confirm the connection of each connector and FFC at first. And confirm that normal power supply voltage is supplied from the SYPS Assy to each Assy.


START
Set to VIDEO ON
Yes
Does the video output come out ?
No
Is VIDEO OFF state ?
No
Is each signal of CN506 on the DVDM Assy normal ?
No
DVDM Assy
Yes
VOUT Assy
Yes
Set to Digital Data ON
Yes
Does the digital audio come out ?
No
Is Digital Data OFF state ?
No
Is each signal of pins 4 and 7 of CN508 on the DVDM Assy normal ?
No
DVDM Assy
Yes
DOUT Assy
Yes
Yes
DSPB Assy
Does the analog 2 ch audio come out ?
No
CD playbacks with the CD Digital Direct ON, and does the sound come out ?
No
Is each signal of pin 11 of CN506 on the DVDM Assy normal ?
No
DVDM Assy
Yes
AUDIO Assy
Yes
Set to 5.1ch mode.
Yes
Does the multi-ch audio come out ?
No
Does it become the 2 CH mode ?
No
Is each signal of pins 13 and 15 of CN505 on the DVDM Assy normal ?
No
DSPB Assy
Yes
Is each power supply of CN601 on the MAUD Assy normal ?
No
MAPS Assy
Yes
MAUD Assy
Yes
OK
Normal

7.1.3 ERROR CODE

Error codes that are displayed on the FL display without using the remote control unit

FL Display	Possible causes	Operation of the unit
AV1 VER	AV-1 chip is not a match with the program of system controller	The sound may not out with the specific audio.
CPU AERR	CPU address error (Hardware is unusual.)	No operation
DMA AERR	DMA address error (Hardware is unusual.)	No operation
FLASH ID	Difference in versions of the internal ROM of the system controller and of the flash ROM, or bus line failure or reverse installation	No operation
FLASH WRP	Write protect error of the flash ROM	No operation
FLASH SIG	Difference in part number of the flash ROM (When the ROM which could't be used was used.)	No operation
FLASH SUM	Check sum error of the flash ROM (It exceeds the regular size.) or reverse installation (Hardware is unusual.)	No operation
FLASH SIZE	Size error of the flash ROM (Use 4 or 8 M-bit.)	No operation
ILLGAL	The system controller fetched a code other than an operation code (Hardware is unusual.)	No operation
RESERVE	Undefined interrupt (Hardware is unusual.)	No operation
SLOT	Inappropriate slot command issued (Hardware is unusual.)	No operation

Error codes that are displayed on the FL display by using the remote control unit (Mechanism controller error)

To display: ESC + DISPLAY + DISPLAY; Location of the display: At the two digits of center of the FL display

To display the error history: ESC + DISPLAY + One shot; Location of the display: TV screen

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
11	Search timeout	Search could not be complete within 7 seconds.	Search could not be complete within 7 seconds, and it could not enter the target area within 7 seconds by VCD scan.	CD : Stops, DVD : Continues operation
12	Search retry error	A search could not be completed after 3 retries, search backup was executed 4 times, or in a case of timeout (6 seconds) while the unit was tracing 11 tracks or more beyond the target while the search operation was converging.	Backup against slider skip was executed 4 times during a search, or slider skip twice resulted in starting from the read-in point.	CD : Stops, DVD : Continues operation
19	Tracing timeout while converging	Timeout (10.5 seconds) while tracing at the stage of convergence of a search.		Stop
1B	Index 0 search error		During Track (Index) Search, the search for the beginning of a program could not be completed within 3 seconds (20 seconds in the case of Index Search) after positioning based on the TOC data was completed.	Stop
22	Timeout of slider inner circumference	Inside switch could not ON within 3 seconds.		Stop
23	Timeout of slider outer circumference	Inside switch could not OFF within 2 seconds.		Stop
33	No FOK pulse during playback CLVA	When the focus was deviated continuously 20 times.		Adjusts focus at the innermost circumference and tries to return to its position where the error was generated (for 3 times),then opens. If the same error persists after one retry, the tray opens. (No FOK pulse)
38	Disc-type-sensing error	If normal starting was impossible in the following three cases, disc-type sensing will be retried if other errors occure excepting C5 error. However, when the focus error "33" was occured continuously 3 times, it is finished as "38 error" at the moment: (1) startup with the first disc-type-sensing result, (2) forced startup with another disc by designating the disc type, (3) forced startup with the original disc by designating the disc type.		Open

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the
39	SGC converge timeout	SGC could not converge during detects the peak		Open
41	Spindle timeout	The unit did not enter Stop mode within 10 seconds of issuance of a Stop command.		Stop
48	Spindle FG transition timeout	The spindle could not converge into within ± 12% of the target FG rotation speed within 10 seconds after spindle kick. The first time after startup (the first time after disc distinction), it doesn't become the number of the target rotation within five seconds. The first time after startup, detects the abnormal rotation number of high-speed continuously 3 loops. DVD: 5 to 9 mS , CD: 40 to 60 mS		Stops. (FG timeout)
49	Spindle PLL transition timeout	After the second times after startup, it doesn't become the number of the target rotation within five seconds. Detects the abnormal high-speed or low-speed rotations. DVD: 5 to 9 mS , CD: 40 to 60 mS		Stops. ("73" is displayed during starting process.)
4A	Spindle lock timeout	Spindle could not lock more than 1.5 seconds before start the AFB.		Stops. ("73" is displayed during starting process.)
51	Auto sequence timeout of peak detection	ABUSY did not return within 1 second after the DDTCT (peak detection) command was sent.		Stop
52	Auto sequence timeout of focus jump down	ABUSY did not return within 30 mS after the FJMPD (Focus jump 1 to 0) command was sent.		Stop
53	Auto sequence timeout of focus jump up	ABUSY did not return within 30 mS after the FJMPU (Focus jump 0 to 1) command was sent.		Stop
54	Auto sequence timeout of play AGC	ABUSY did not return within 50 mS after the GSUMON (play-AGC-measuring) command was sent.		Stop
55	Auto sequence timeout of disc-type-sensing	ABUSY did not return within 2 seconds after the DJSRT (disc-sensing) command was sent.		Stop
56	Auto sequence timeout of ATB2	ABUSY did not return within 1 second after the TBLOFS (Internal ATB after the completion of external ATB) command was sent.		Stop
57	Auto sequence timeout of tracking servo ON	ABUSY did not return within 500 mS after the TSON (tracking servo ON) command was sent.		Stop
58	Auto sequence timeout of ATB1	ABUSY did not return within 200 mS after the TBL (external ATB) command was sent.		Stop
59	Auto sequence timeout of focus gain adjustment	ABUSY did not return within 2 seconds after the FGN (focus gain adjustment) command was sent.		Stop
5A	Auto sequence timeout of tracking gain adjustment	ABUSY did not return within 2 seconds after TGN (tracking gain adjustment) command was sent.		Stop
5B	Auto sequence timeout of offset adjustment	ABUSY did not return within 1 second after the CMDAVE (offset adjustment) command was sent.		Stop
5C	Auto sequence timeout of modulation factor measurement	ABUSY did not return within 200 mS after the ADJMIR (modulation factor measurement) command was sent.		Stop
5D	Auto sequence timeout of auto focus bias	ABUSY did not return within 2 seconds after the AFB (auto focus bias) command was sent.		Stop
5F	Auto sequence already busy	A command could not be sent because ABUSY was low. ABUSY did not return within 200 mS after TLV command was sent.		Stop
62	Pause retry error	Pause mode could not be restored within three retries after it had been released.		Continues operation

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
71	ID can not read during tracing	An ID could not be read for 1 second or more.		Stop
72	Subcode check failure during playback		No frame could be read for 3 seconds or more.	Stop
73	ID can not read at the startup	An ID could not be read within 1 second after the AFB adjustment had been finished.		Opens (ID readout failure)
74	Subcode check failure during startup		No subcode could be read within 3 seconds after AFB adjustment had been finished.	Opens (Subcode readout failure).
81	Timeout for reading TOC of the mechanism controller		TOC readout took 30 seconds or more.	Stop
82	Timeout for reading TOC of the system controller		Reading TOC of the system controller took 30 seconds or more.	Stop
91	Timeout of door open	Door open took 10 seconds or more.		Close
92	Timeout of door close	Door close took 10 seconds or more.		Open
A1	Communication timeout of DSP command	A command could not be issued to DSP because Command Busy (XCBUSY) was in force (XCBUSY = L) for a specified time (about 200 mS).		No operation
A2	Communication timeout for reading DSP coefficient	Command Busy (XCBUSY) was in force for a specified time (about 200 mS) before and after a coefficient read command was issued to DSP, or the address echo-back after command issuance did not match the setup address.		No operation
A3	Communication timeout for writing DSP coefficient	Command Busy (XCBUSY) was in force for a specified time (about 1024 mS) before and after the coefficient write command was issued to DSP.		No operation
A4	Communication timeout for continuously writing DSP coefficient	Command Busy (XCBUSY) was in force for 200 µS during continuous coefficient writing, or before and after a continuous write command was issued to DSP.		No operation
A7	Servo DSP hang	Servo DSP is hang when releasing the DAC mode.		
B1	Timeout error for backup	In the tracing state during the backup sequence, codes could not be read for 1 second or more. In the backup sequence, tracking ON sequence of the servo DSP could not be completed even if more than 500 mS after the tracking ON command was issued.		Stops
B2	Retry error for backup	Tracing impossible after retring the tracking ON for 3 times in the backup sequence.		Stops
B3	Retry error for trace	During tracing, runaway was detected after three iterations of backup operations for detecting runaway.		Stops

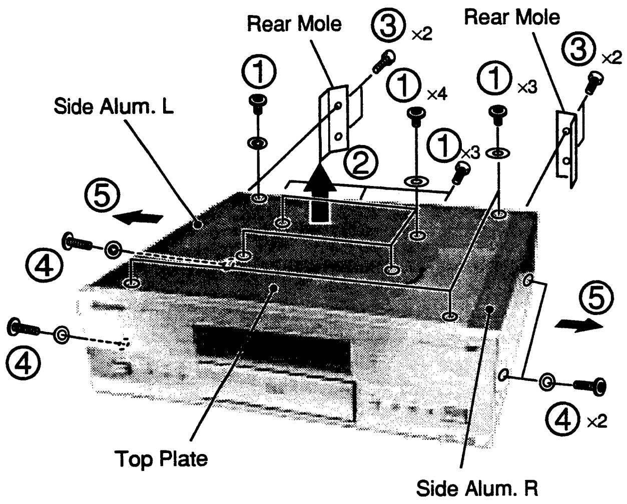
C3	Detection of tracking overcurrent	During playback, the overcurrent detection port was at L for 300 ms or more continuously.		Stops (the mechanical controller operates independently).
(C5)	Short-circuit test corresponding error	While the power was on, the overcurrent detection port was at L for 40 ms or more continuously.		Turns off the power instantly (No indication on the FL display and no writing to flash memory)
E3	Violation against digital copy guard			Stops
F5	Tray being pushed	The tray switch that had been Open mode was forcibly changed to a mode other than Open by an external force.		Closes
F8	Loading timeout	Loading, unloading or clamping could not be completed within a specified time (about 5 seconds).		Reverses the loading direction. It timeout is repeated upon retry, the unit stops.
FC	Focus	The following error occured eight times. (1) Focus ON sequence could not be completed even if more than two seconds after the focus ON command (to the servo DSP) was sent. (2) Focus IN sequence was finished, actually focus IN was not completed.		Stops wherever possible then opens (stops in the case of side B).

Error codes that are displayed on the FL display by using the remote control unit (Device error)
To display : ESC + DISPLAY + DISPLAY ; Location of the display : At the two digits of left of the FL display

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
bit3=1 08 etc.	AV1 access error (read, write NG)			No operation or it becomes debugging indication if the power is able to ON.
bit2=1 04 etc.	MY CHIP access error			
bit1=1 01 etc.	SRAM access error			

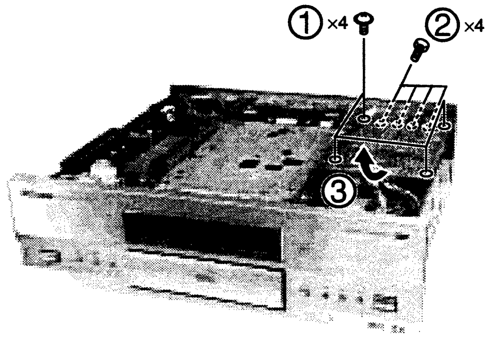
7.1.4 DISASSEMBLY

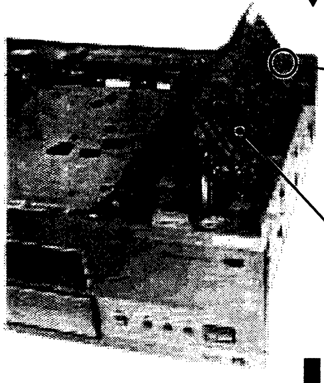
■Top Plate, Side Alum. L and R


Rear Mole
③ ×2
Rear Mole
③ ×2
①
① ×4
① ×3
Side Alum. L
②
① ×3
⑤
④
④
⑤
④ ×2
Top Plate
Side Alum. R

To Each disassembly

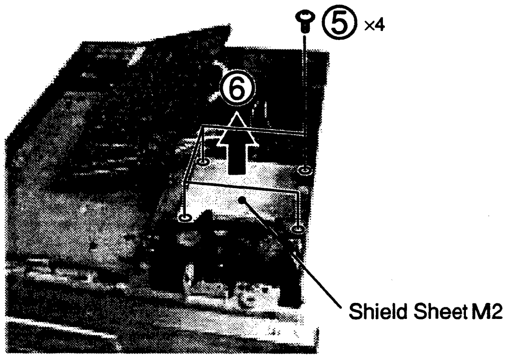
■MAUD and AUDIO Assys

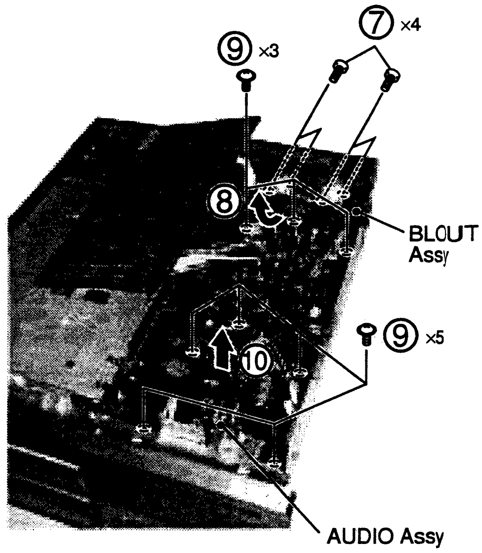


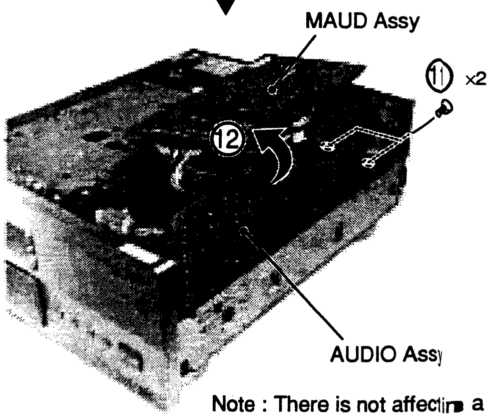


④ Hook the MAUD Assy on a cut part of Rear Panel.

Diagnosis of MAUD Assy


⑤ ×4
⑥
Shield Sheet M2

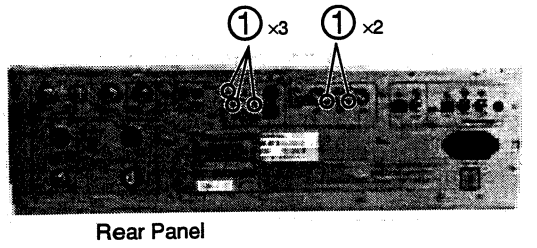

⑨ ×3
⑦ ×4
⑧
BLOUT Assy
⑨ ×5
⑩
AUDIO Assy

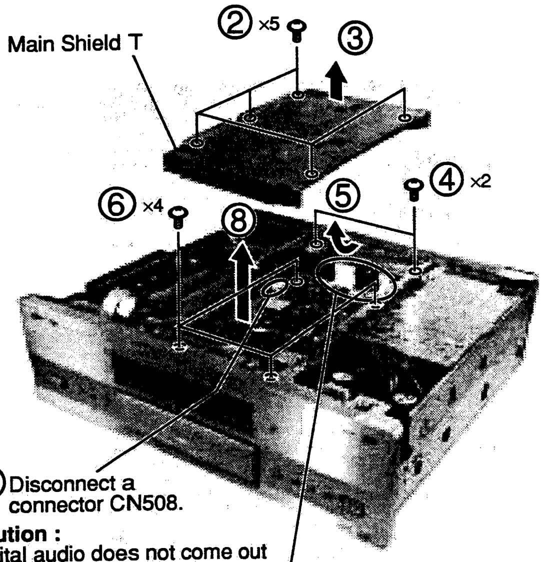

MAUD Assy
⑪ ×2
⑫
AUDIO Assy

Note : There is not affecting a diagnosis even if removes the BLOUT Assy.

Diagnosis of AUDIO Assy

■ VOUT, DVDM and DSPB Assys


①×3
①×2
Rear Panel


Main Shield T
②×5
③
④×2
⑤
⑥×4
⑧

⑦ Disconnect a connector CN508.

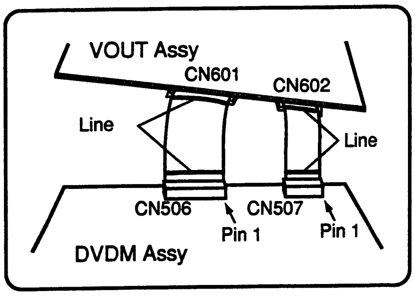
Caution :
Digital audio does not come out when disconnecting a connector of CN508, but there is not affect in a diagnosis.

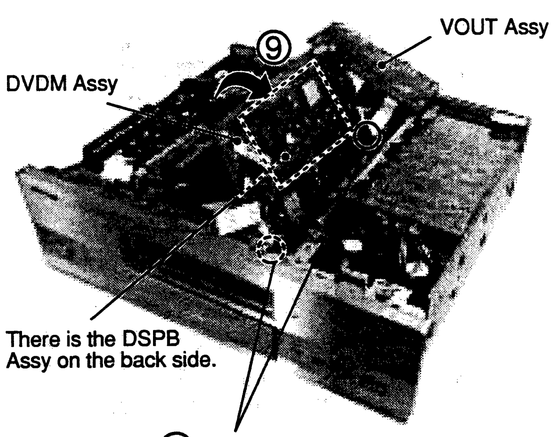
Caution :

① Video is not output when removed two flexible cables of the VOUT Assy. In addition, please install two flexible cables surely before diagnosing the remote control unit because it does not work.

② As for the flexible cable using for the VOUT Assy, a direction to insert is settled. Please connect the flexible cable not to mistake a direction to insert while referring to figure below.

③ There is not affect in a diagnosis even if removes the DOUT Assy.


VOUT Assy
CN601
CN602
Line
Line
CN506
CN507
Pin 1
Pin 1
DVDM Assy


VOUT Assy
⑨
DVDM Assy

There is the DSPB Assy on the back side.

⑩ Stand the DVDM Assy against the PCB Holder.

Diagnosis

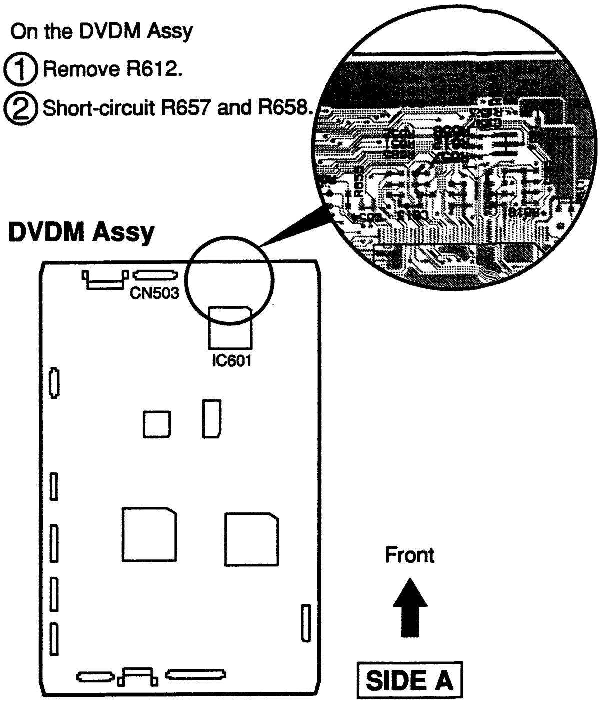
- **About the operating of DVDM Assy when the DSPB Assy was removed**

A microcomputer (IC601 : SH1) on the DVDM Assy works with 20 MHz clock supplied from the DSPB Assy. So the microcomputer does not work when removes the DSPB Assy. Diagnosis of the DVDM Assy becomes possible even if there is not DSPB Assy because operates a crystal oscillator (X601) on the DVDM Assy and works the microcomputer.
Perform the following operations to oprate X601.

On the DVDM Assy

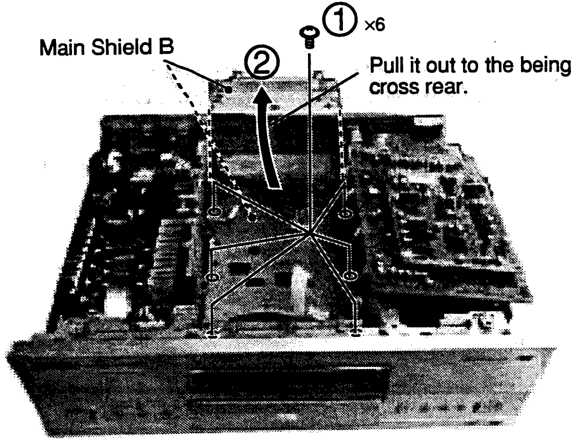
① Remove R612.

② Short-circuit R657 and R658.


DVDM Assy
CN503
IC601
Front
SIDE A

Caution :
After the diagnosis was completed, return the resistors mentioned above to the original state surely.

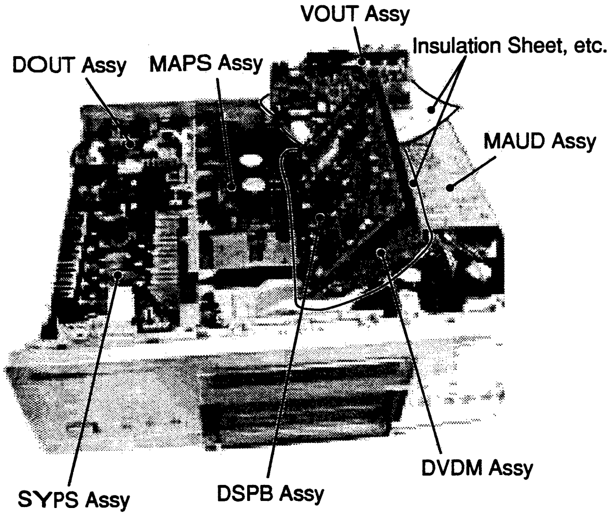
■ Main Shield B and MAPS Assy

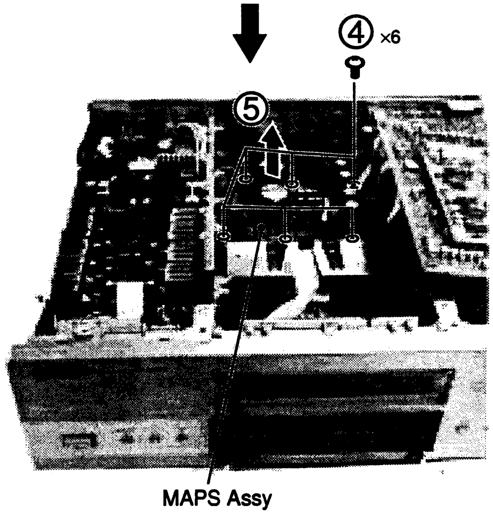

① ×6
Main Shield B
②

Pull it out to the being cross rear.

③ Stand the PCB and diagnose it.

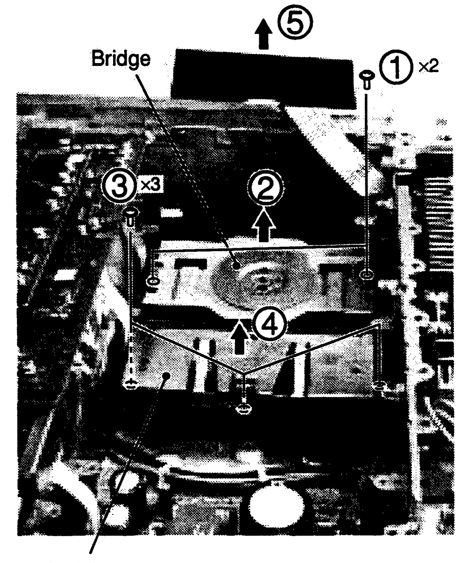
Caution : Do not short-circuit by using the insulation sheet, etc..

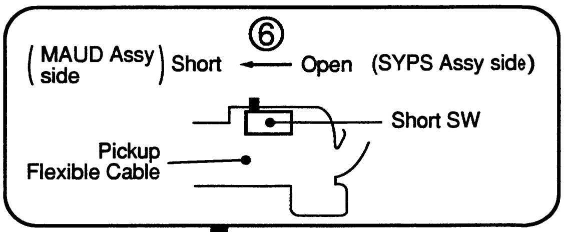

VOUT Assy
DOUT Assy
MAPS Assy
Insulation Sheet, etc.
MAUD Assy
DVDM Assy
SYPS Assy
DSPB Assy

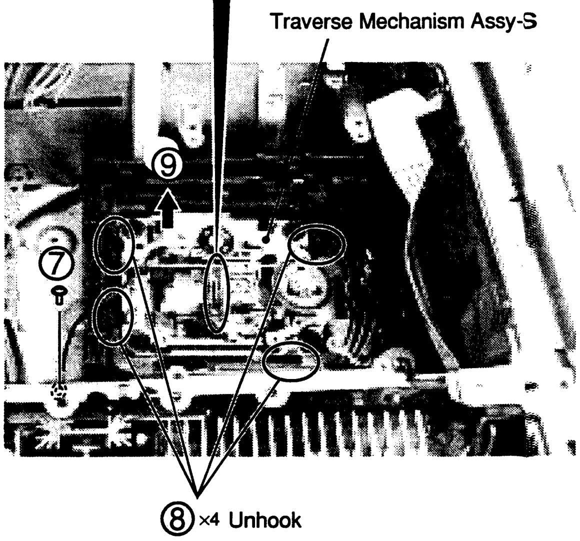

④ ×6
⑤
MAPS Assy

Note : When MAPS Assy is diagnosed, remove the VOUT Assy, Trans. Shield and Main Shield B.

■ Traverse Mechanism Assy-S


⑤
Bridge
① ×2
③ ×3
②
④
Tray Stabilizer


⑥
(MAUD Assy side) Short ← Open (SYPS Assy side)
Short SW
Pickup Flexible Cable


Traverse Mechanism Assy-S
⑨
⑦
⑧ ×4 Unhook

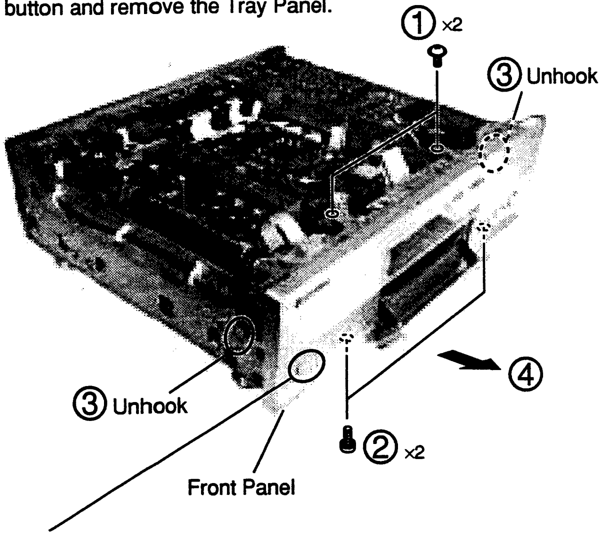
Diagnosis

About the mechanism replacement

- When Loading Mechanism is removed, remove the Front Panel and pull it out toward the front.
- When Traverse Mechanism is replaced, replace it after removing the Loading Mechanism mentioned above.

■SYPS, DOUT and LSFB Assys

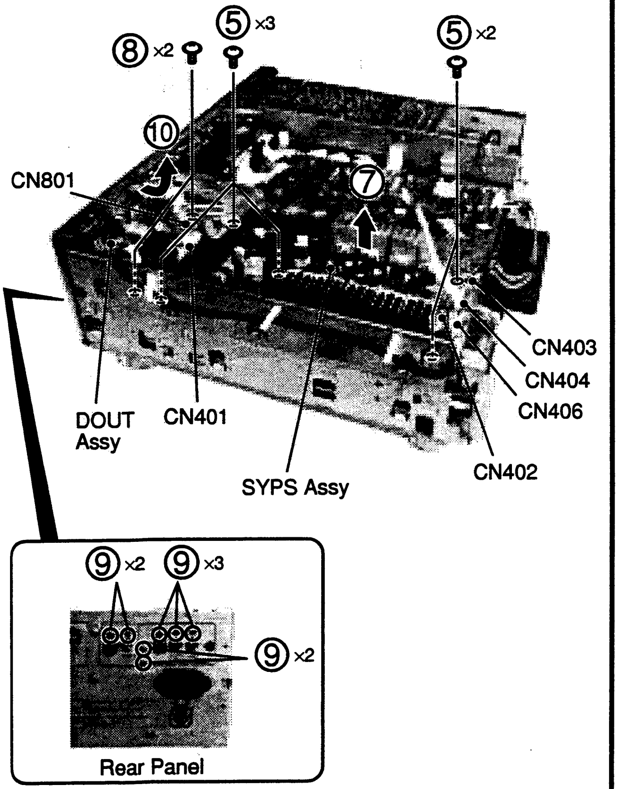
- Turn the power on, and pull out the Tray by pressing the ■/≜ button and remove the Tray Panel.


①×2
③ Unhook
③ Unhook
④
②×2
Front Panel

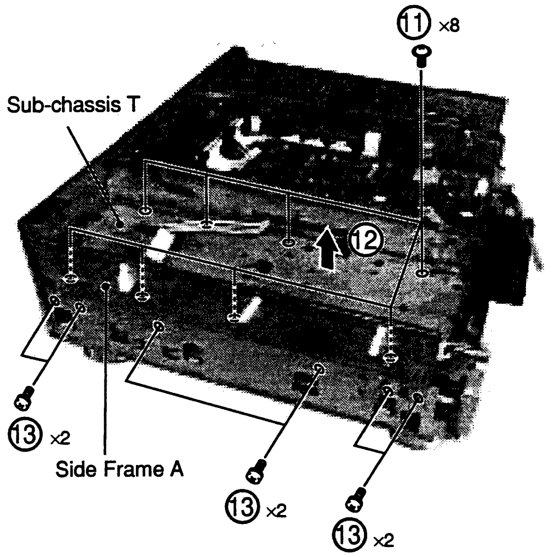
④ Pull out the Front Panel toward the front by removing the POWER button from the switch. (Come off when it pulls in the front straight.)
Note : Be careful not to put the front face of Front Panel under because the door works.

⬇

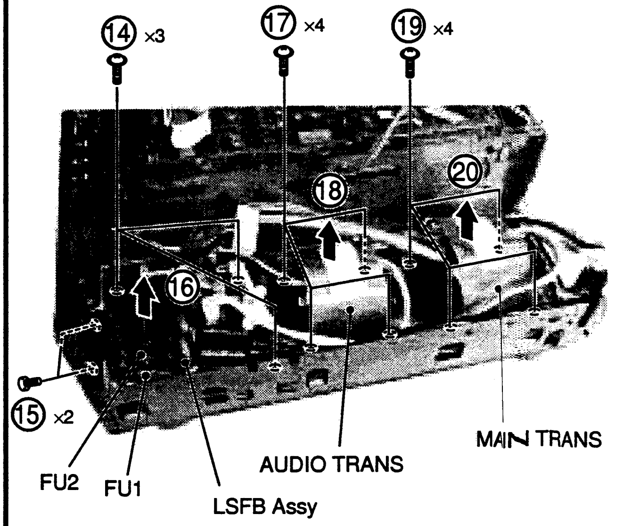
⑥ Remove 6 connectors and unhook.


⑤×3
⑤×2
⑧×2
⑩
⑦
CN801
CN403
CN404
CN406
DOUT Assy
CN401
CN402
SYPS Assy
⑨×2
⑨×3
⑨×2
Rear Panel

⬇


⑪×8
Sub-chassis T
⑫
⑬×2
Side Frame A
⑬×2
⑬×2

⬇


⑭×3
⑰×4
⑲×4
⑱
⑳
⑯
⑮×2
FU2
FU1
LSFB Assy
AUDIO TRANS
MAIN TRANS

- Fuses (FU1 and FU2) of primary side can not diagnose directly. Therefore, check the voltage of connector of secondary side and judge the fuse blown.
- Perform replacement of fuses (FU1 and FU2) of the primary side after removing the Rear Panel.

7.2 PARTS

7.2.1 IC

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

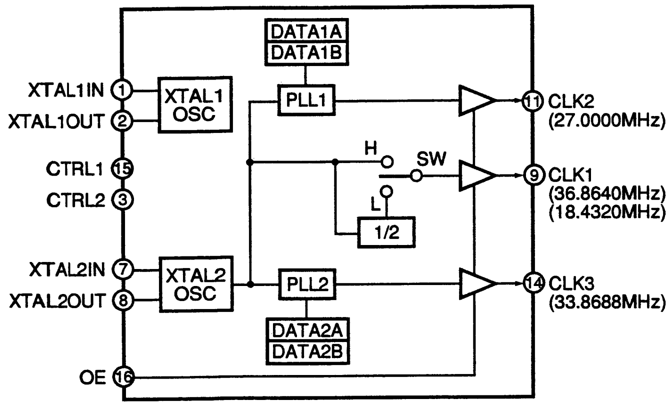
•List of IC

BU2185F, LC89055W-RA8, PD3410A, PM0024AF, CY2071ASL-371

■ BU2185F (DVDM ASSY : IC959)

- **Clock Generate IC**

• Block Diagram


DATA1A
DATA1B
XTAL1IN ①
XTAL1OUT ②
XTAL1 OSC
PLL1
⑪ CLK2 (27.0000MHz)
CTRL1 ⑮
CTRL2 ③
H
SW
L
1/2
⑨ CLK1 (36.8640MHz) (18.4320MHz)
XTAL2IN ⑦
XTAL2OUT ⑧
XTAL2 OSC
PLL2
⑭ CLK3 (33.8688MHz)
DATA2A
DATA2B
OE ⑯

• Truth Table

CTRL1	CTRL2	SW	PLL1	PLL2
H	L	H	DATA1A	DATA2A
L	L	L	DATA1A	DATA2A
H	H	H	DATA1B	DATA2B
L	H	L	DATA1B	DATA2B

DATA1A=XTAL2×375/128/4
DATA1B=XTAL2×375/64/4
DATA2A=XTAL2×147/40/4
DATA2B=XTAL2×147/20/4

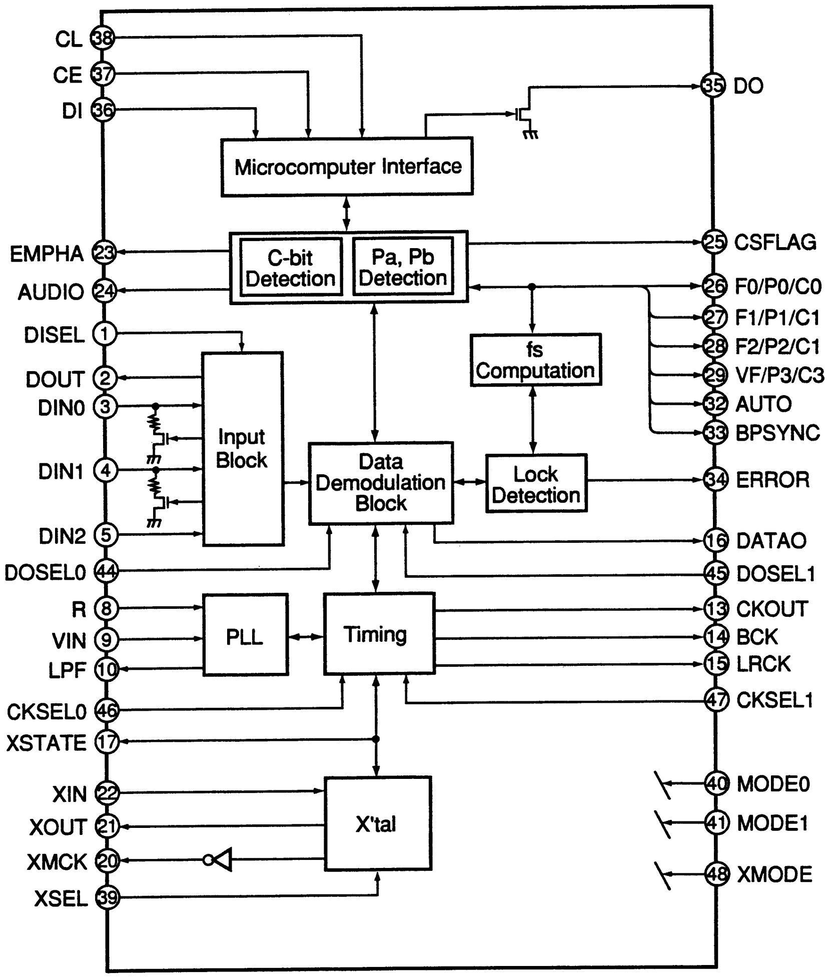
• Pin Function

No.	Pin Name	Function
1	XTAL1-IN	Reference OSC input 1 (Not used)
2	XTAL1-OUT	Reference OSC output 1
3	CTRL2	X'tal setting L: 36.8M mode, H: 18.4M mode
4	AGND	Analog GND
5	DGND	Digital GND
6	DVDD	Independent power supply for XTAL2-IN and XTAL2-OUT
7	XTAL2-IN	Reference OSC input 2 (36.864MHz or 18.432MHz)
8	XTAL2-OUT	Reference OSC output 2
9	CLK1	Reference clock output (36.864MHz or 18.432MHz)
10	DVDD	Independent power supply for CLK1 output buffer
11	CLK2	Clock output 2 (27.000MHz)
12	DVDD	Digital VDD
13	AVDD	Analog VDD
14	CLK3	Clock output 3 (33.8688MHz)
15	CTRL1	CLK1 output select H: 36.864MHz, L: 18.432MHz
16	OE	Output enable H: enable, L: disable

■ LC89055W-RA8 (DVDM ASSY : IC6001)

- DIR IC

● Block Diagram


CL 38
CE 37
DI 36
Microcomputer Interface
35 DO
EMPHA 23
AUDIO 24
C-bit Detection
Pa, Pb Detection
25 CSFLAG
26 F0/P0/C0
27 F1/P1/C1
28 F2/P2/C1
29 VF/P3/C3
32 AUTO
33 BPSYNC
DISEL 1
DOUT 2
DIN0 3
DIN1 4
DIN2 5
Input Block
fs Computation
Data Demodulation Block
Lock Detection
34 ERROR
16 DATAO
DOSEL0 44
45 DOSEL1
R 8
VIN 9
LPF 10
PLL
Timing
13 CKOUT
14 BCK
15 LRCK
CKSEL0 46
47 CKSEL1
XSTATE 17
XIN 22
XOUT 21
XMCK 20
XSEL 39
X'tal
40 MODE0
41 MODE1
48 XMODE

• Pin Function

No.	Pin Name	I/O	Function
1	DISEL	I	Selective input of data input (DIN0, DIN1)
2	DOUT	O	Through output of input biphase data
3	DIN0	I	Digital data input (CMOS level and exist pull-down resistor at not used.)
4	DIN1		
5	DIN2	I	Digital data input (TTL level)
6	DGND	–	Digital GND
7	DVDD	–	Digital power supply
8	R	I	VCO gain control input
9	VIN	I	Setting input of VCO free-running frequency
10	LPF	O	PLL loop filter setting
11	AVDD	–	Analog power supply
12	AGND	–	Analog GND
13	CKOUT	O	Clock output (256fs, 384fs, 512fs, crystal oscillation and VCO free-running oscillation)
14	BCK	O	64fs clock output
15	LRCK	O	fs clock output (L=R ch, H=L ch, I^2S=inversion)
16	DATAO	O	Data output
17	XSTATE	O	Switching monitor output of source clock
18	DGND	–	Digital GND
19	DVDD	–	Digital power supply
20	XMCK	O	Crystal resonator clock output (24.576MHz or 12.288MHz)
21	XOUT	O	Crystal resonator connection output
22	XIN	I	Crystal resonator connection input, External signal is able to input (24.576MHz or 12.288MHz)
23	EMPHA	O	Emphasis information output of channel status
24	AUDIO	O	Bit 1 (Non PCM data detecting bit) output of channel status
25	CSFLAG	O	Lead 40-bit update flag output of channel status
26	F0/P0/C0	O	Input fs calculation signal output / Pc data type output / Input word information output
27	F1/P1/C1		
28	F2/P2/C2		
29	VF/P3/C3	O	Validity flag output / Pc data type output / Input word information output
30	DVDD	–	Digital power supply
31	DGND	–	Digital GND
32	AUTO	O	Transmission detecting signal output of non PCM burst data (Pa and Pb detection)
33	BPSYNC	O	Sync. signal output of non PCM burst preamble Pa, Pb, Pc and Pd
34	ERROR	O	PLL lock error and data flag error output
35	DO	O	Read data output of microcomputer IF
36	DI	I	Write data input of microcomputer IF
37	CE	I	Chip enable input of micocomputer IF
38	CL	I	Clock input of microcomputer IF
39	XSEL	I	Selective input of crystal resonator frequency of XIN pin (24.576MHz or 12.288MHz)
40	MODE0	I	Mode setting input
41	MODE1		
42	DGND	–	Digital GND
43	DVDD	–	Digital power supply
44	DOSEL0	I	Selective input of output data format
45	DOSEL1		
46	CKSEL0	I	Selective input of output clock
47	CKSEL1		
48	XMODE	I	System reset input

■ PD3410A (DVDM ASSY : IC601)

• System Control IC

● Pin Function

No.	Mark	Pin Name	I/O	Function
1	XCS3/XCASL	XCS3	O	PE5108A (BY CHIP) chip select signal output
2	GND	GND	–	GND
3	CK	HCPUCK	O	20MHz clock output
4	VCC	V+3D	–	V+3D
5	PICLK	–	I/O	N.C.
6	PIDATA	–	I/O	N.C.
7	GND	GND	–	GND
8	PORTH0	XCSPO	O	HC74VHCT595FT (Shift register with output latch)
9	PORTH1	33MVH	O	CY2071ASL-371 (Clock generator)
10	PORTH2	36MVH	O	BU2185F clock generator
11	PORTH3	V_SEL2	O	Video switching signal output
12	VCC	V+3D	–	V+3D
13	PORTH4	SCTAON	O	Audio output ON signal of the skirt terminal
14	PORTH5	27MVH	O	27MHz oscillation control circuit
15	PORTH6	XCSSPD	O	HC74VHCT595FT (Shift register with output latch)
16	PORTH7	VOFF	O	Video system OFF signal
17	GND	GND	–	GND
18	EXTAL	EXTAL	I	Connect a ceramic resonator
19	XTAL	XTAL	O	
20	VCC	V+3D	–	V+3D
21	PORTG0	XCSDF0	O	DAC chip select signal output
22	PORTG1	XCSDF1	O	TC74VHC595FT (Serial / parallel)
23	PORTG2	DFRST1	O	SM5847AF (for M ch)
24	PORTG3	HIBSEL	O	PD00236AM
25	PORTG4	DFRST0	O	SM5847AF (DAC for 2 ch)
26	GND	GND	–	GND
27	PORTG5	XMAOFF	O	Multi ch power OFF
28	PORTG6	XMRST	O	PD00236AM
29	PORTG7	XAMUTE	O	Last stage mute signal output of the audio 2 ch
30	PORTF0	44X48	O	DAC 44/48 FS switching signal output
31	PORTF1	DI_ERR	I	DIR1700 (Digital audio interface receiver)
32	PORTF2	XMMUTE	O	Multi last stage mute signal output
33	VCC	V+3D	–	V+3D
34	PORTF3	XCSADSP0	I	XCD56362 (Audio DSP)
35	PORTF4	XCSADSP1	O	XCD56362 (Audio DSP)
36	PORTF5	XCSADSP2	O	CXD2751Q
37	PORTF6	XRSTVE	O	
38	PORTF7	XCSVE	O	Serial communication enable signal output of the video encoder
39	GND	GND	–	GND
40	AVSS	GND	–	GND

No.	Mark	Pin Name	I/O	Function
41	AVCC	V+3D	–	V+3D
42	OUTA_P	DRV	O	Door or loading drive output
43	VREF	V+3D	–	V+3D
44	OUTB_P	TEI	O	Tracking offset signal output
45	AVSS	GND	–	GND
46	AVSS	GND	–	GND
47	PORTE0	V_SEL1	O	8 video switching signal output (RGB / others)
48	PORTE1	CDGM	I	
49	PORTE2	ATBOS	I	
50	PORTE3	FOFST1	I/O	Focus offset adjustment output 1
51	PORTE4	FOFST2	I/O	Focus offset adjustment output 2
52	PORTE5	XDFINH	I/O	Defect shunt signal output
53	PORTE6	DVD/XCD	O	DVD/CD switching signal output
54	PORTE7	LD1_ON	O	650 nm laser diode ON signal output
55	PORTD0	LD2_ON	O	780 nm laser diode ON signal output
56	VCC	V+3D	–	V+3D
57	PORTD1	DPD/TE	O	1 beam/3 beams switching signal output
58	PORTD2	AGOFF	O	AGC ON/OFF switching signal output of RF IC
59	PORTD3	XCD2X	O	Signal output for switching the double speed playback
60	PORTD4	OEICG	O	OEIC gain switching signal output
61	GND	GND	–	GND
62	PORTD5	XMON	O	ON/OFF switching signal output of the spindle motor control output
63	PORTD6	–	O	
64	PORTD7	–	I	
65	PORTJ0	XDRVMUT	O	Driver mute output
66	PORTJ1	LDXDR	O	TC7W53FU (Analog SW)
67	PORTJ2	XDSPRST	O	LC78652W (Servo DSP)
68	PORTJ3	MNJACK	I	Mini jack connection check pin
69	VCC	V+3D	–	V+3D
70	PORTJ4	TM_ENT	I	Test mode entry
71	PORTJ5	XEXPE	O	TC74VHC574FT (3-state buffer)
72	PORTJ6	VSEL_SW	I	
73	PORTJ7	–	I	
74	PB0/TIOCA2	XCBUSY	I	Command busy input
75	PB1/TIOCB2	XABUSY	I	Auto-sequence busy input
76	PB2/TIOCA3	XINT2	I	Interrupt input 2 (AV-1)
77	VCC	V+3D	–	V+3D
78	PB3/TIOCB3	LT1	O	Communication response signal output to the FL controller
79	PB4/TIOCA4	SBSY	I	Subcode block sync. input
80	XMTEST	–	I	V+3D
81	XCPUMD	–	I	V+3D
82	XRES	HXRST	I	Reset input
83	GND	GND	–	GND
84	AN0	LODPOS	I	Loading position input
85	AN1	SLDPOS	I	Slider position input
86	AN2	DOORSW	I	Door position input of mechanism controller
87	AN3	NAP_SW	I	NTSC/AUTO/PAL SW input
88	AN4	–	I	
89	AN5	–	I	
90	AN6	–	I	

No.	Mark	Pin Name	I/O	Function
91	AN7	I/XP	I	Interface / Progressive switch
92	Avref	V+3D	–	V+3D
93	AVCC	V+3D	–	V+3D
94	AVSS	GND	–	GND
95	PB5/TIOCB4	DIBLK	I	DIR1700 (Digital audio interface receiver)
96	PB6/TIOCXA4/TCLKC	C2F	I	C2 error input
97	PB7/TIOCXB4/TCLKD	XRDY	I	Communication request input from the FL controller
98	PB8/RxD0	SSI	I	Serial data input (FL controller and Audio DSP)
99	PB9/TxD0	SSO	O	Serial data output (FL controller, Audio DSP and VQE)
100	VCC	V+3D	–	V+3D
101	PB10/RxD1	RXD	I	Data input of the RS-232C
102	PB11/TxD1	TXD	O	Data output of the RS-232C
103	PB12/XIRQ4/SCK0	SSCK	I/O	Serial clock output t (FL controller, Audio DSP and VQE)
104	PB13/XIRQ5/SCK1	XIRQL10	I	Interrupt input 1 (MY CHIP)
105	GND	GND	–	GND
106	PB14/XIRQ6	XIRQL11	I	Interrupt input 2 (MY CHIP)
107	PB15/XIRQ7	XINT0/XAVIRQ0	I	Interrupt input 0 (AV-1)
108	PA0/XCS4/TIOCA0	XCS4	O	Servo DSP chip select signal output
109	PA1/XCS5/XRAS	N.C.	O	Non connection
110	PA2/XCS6/TIOCB0	XCS6	O	AV-1 chip select signal output
111	XWAIT	XWAIT	I	Wait signal input
112	XWRL	XWRL	O	Write pulse output L
113	GND	GND	–	GND
114	XWRH	XWRH	O	Write pulse output H
115	XRD	XRD	O	Read pulse output
116	PA7/XBACK	DSPCUR	I	Over-current detection signal input
117	PA8/XBREQ	CTS	I	RS-232C transfer permit input
118	PA9/XAH/XIRQOUT/ XADTRG	DTR	O	RS-232C transfer permit output
119	PA10/DPL/TIOCA1	XAVIRQ1/XINT1	I	Interrupt input 1 (AV-1)
120	PA11/DPH/TIOCB1	THLD	I	Tracking hold signal input
121	VCC	V+3D	–	V+3D
122	PA12/XIRQ0/DACK0/ TCLKA	DACK0	O	DMA response output (MY CHIP)
123	PA13/XIRQ1/ XDREQ0/TCLKB	XSDREQ	I	DMA request input (MY CHIP)
124	PA14/XIRQ2/XDACK1	XDACK1	O	DMA response output (AV-1)
125	PA15/XIRQ3/XDREQ1	XDREQ1	I	DMA request input (AV-1)
126	AD0	D0	I/O	Data bus 0
127	GND	GND	–	GND
128	AD1	D1	I/O	Data bus 1
129	AD2	D2	I/O	Data bus 2
130	AD3	D3	I/O	Data bus 3

No.	Mark	Pin Name	I/O	Function
131	AD4	D4	I/O	Data bus 4
132	AD5	D5	I/O	Data bus 5
133	AD6	D6	I/O	Data bus 6
134	VCC	V+3D	–	V+3D
135	AD7	D7	I/O	Data bus 7
136	AD8	D8	I/O	Data bus 8
137	AD9	D9	I/O	Data bus 9
138	AD10	D10	I/O	Data bus 10
139	GND	GND	–	GND
140	AD11	D11	I/O	Data bus 11
141	AD12	D12	I/O	Data bus 12
142	AD13	D13	I/O	Data bus 13
143	AD14	D14	I/O	Data bus 14
144	VCC	V+3D	–	V+3D
145	AD15	D15	I/O	Data bus 15
146	A0 (XHBS)	A0	O	Address bus 0
147	A1	A1	O	Address bus 1
148	A2	A2	O	Address bus 2
149	GND	GND	–	GND
150	A3	A3	O	Address bus 3
151	A4	A4	O	Address bus 4
152	A5	A5	O	Address bus 5
153	A6	A6	O	Address bus 6
154	A7	A7	O	Address bus 7
155	A8	A8	O	Address bus 8
156	A9	A9	O	Address bus 9
157	A10	A10	O	Address bus 10
158	A11	A11	O	Address bus 11
159	A12	A12	O	Address bus 12
160	A13	A13	O	Address bus 13
161	A14	A14	O	Address bus 14
162	A15	A15	O	Address bus 15
163	A16	A16	O	Address bus 16
164	A17	A17	O	Address bus 17
165	VCC	V+3D	–	V+3D
166	A18	A18	O	Address bus 18
167	A19	A19	O	Address bus 19
168	A20	A20	O	Address bus 20
169	A21	A21	O	N.C.
170	XNMI	XNMI	I	V+3D
171	GND	GND	–	GND
172	XCS10	XCS10	O	TC7SH32FV (3-state buffer)
173	XCS20	XCS20	O	Chip select signal output of the flash ROM
174	XCS22	–	O	
175	XCS23	XCS23	O	Chip select signal output of the SRAM
176	XCS2	–	O	N.C.

■ PM0024AF (DVDM ASSY : IC1001)

• Video Encoder IC

• Pin Function

No.	Pin Name	I/O	Pin Function
1	GND_00	–	Ground Connect to reference voltage (0V).
2	CLK27I	I	External clock (27MHz) input. Connect to VCC (+3.3V) when using XIN and XOUT.
3	VDD_00	–	Power supply Connect to 3.3V.
4	T_03	I	Test mode pin. Connect to GND.
5	T_04		
6	T_05		
7	T_06		
8	T_07		
9	TEST_1	I	Test mode control input Connect to GND.
10	XVSYNC	I/O	Vertical sync. signal input. Outputs at Master mode and inputs at Slave mode (set with the register). Negative polarity
11	XHSYNC	I/O	Horizontal sync. signal input. Outputs at Master mode and inputs at Slave mode (set with the register). Negative polarity
12	VCC_S00	–	Power supply Connect to 3.3V.
13	GND_S00	–	Ground Connect to reference voltage (0V).
14	XIN	I	Connect a crystal resonator (27MHz) Connect to VCC (+3.3V) when using CLK27I (pin 2).
15	XOUT	O	Connect a crystal resonator (27MHz) Set to open when using CLK27I (pin2).
16	GND_01	–	Ground Connect to reference voltage (0V).
17	VI_0	I	(LSB) Video data input Input 8 bit parallel signal of the CCIR-601 form that synchronized into CLK27I or XO.
18	VI_1		
19	VI_2		
20	VI_3		
21	VI_4		
22	VI_5		
23	VI_6		
24	VI_7		(MSB)
25	T_08	I	Test mode pin Connect to GND.
26	GND_S01	–	Ground Connect to reference voltage (0V).
27	T_09	I	Test mode pin Connect to GND.
28	T_10		
29	VDD_01	–	Power supply Connect to 3.3V.
30	OSDCK	O	Clock output for external OSD
31	OSDHSYB	O	Horizontal sync. signal output for external OSD Negative polarity
32	OSDVSYB	O	Vertical sync. signal output for external OSD Negative polarity
33	GND_02	–	Ground Connect to reference voltage (0V).
34	CTA_0	I	OSD data input
35	CTA_1		
36	CTA_2		
37	SG16M	I	SGRAM capacity change input terminal Connect to reference voltage (0V) when using 8M-bit SGRAM. And connect to 3.3V when using 16M-bit SGRAM.
38	BLD_0	I	OSD blend control input
39	BLD_1		
40	VCC_S01	–	Power supply Connect to 3.3V.
41	GND_S02	–	Ground Connect to reference voltage (0V).
42	RMO_0	O	Register monitor output (SPR[0])
43	RMO_1		Register monitor output (SPR[1])
44	RMO_2		Register monitor output (SPR[2])
45	RMO_3		Register monitor output (SPR[3])
46	RMO_4		Register monitor output (SPR[4])
47	GND_AGB0	-	Ground for Guard band Connect to reference voltage (0V).
48	VDD_DAC1	-	Power supply for DAC1 Connect to 3.3V.
49	GND_DAC1	-	Ground for DAC1 Connect to reference voltage (0V).
50	DAOUT1	O	DAC1 output

No.	Pin Name	I/O	Pin Function
51	VDD_DAC2	–	Power supply for DAC2 Connect to 3.3V.
52	GND_DAC2	–	Ground for DAC2 Connect to reference voltage (0V).
53	DAOUT2	O	DAC2 output
54	VDD_DAC3	–	Power supply for DAC3 Connect to 3.3V.
55	DAOUT3	O	DAC3 output
56	GND_DAC3	–	Ground for DAC3 Connect to reference voltage (0V).
57	REXT	–	Connect a reference resistor Connect a 3.1 (3.0) kW resistor to GND.
58	CBL	–	Connect a by-pass capacitor Connect a 0.1mF capacitor to GND.
59	CBU	–	Connect a phase compensation capacitor Connect a 0.1µF ceramic capacitor and 10µF elect. capacitor to GND.
60	GND_AGB1	–	Ground for Guard Band Connect to reference voltage (0V).
61	RMO_5	O	Register monitor output (SPR[5])
62	RMO_6		Register monitor output
63	RMO_7		Register monitor output
64	VCC_S02	–	Power supply Connect to 3.3V.
65	GND_S03	–	Ground for DAC1 Connect to reference voltage (0V).
66	T_11	I	Test mode pin Connect to GND.
67	T_12		
68	T_13		
69	T_14		
70	T_15		
71	VSY01	O	Vertical sync. signal output for analog output Negative polarity
72	HSY01	O	Horizontal sync. signal output for analog output Negative polarity
73	CSY01	O	Composite sync. signal output for analog output Negative polarity
74	CLMP1	O	Clamp signal output for analog output
75	CLMP2	O	Clamp signal output for digital output
76	VDD_02	–	Power supply Connect to 3.3V.
77	VSY02	O	Vertical sync. signal output for digital output Negative polarity
78	GND_S04	–	Ground Connect to reference voltage (0V).
79	HSY02	O	Horizontal sync. signal output for digital output Negative polarity
80	CSY02	O	Vertical sync. signal output for digital output Negative polarity
81	V01_0	O	(LSB) Video data 1 output
82	V01_1		
83	V01_2		
84	V01_3		
85	V01_4		
86	GND_03	–	Ground Connect to reference voltage (0V).
87	V01_5	O	Video data 1 output (MSB)
88	V01_6		
89	V01_7		
90	V01_8		
91	V01_9		
92	VCC_S03	–	Power supply Connect to 3.3V.
93	GND_S05	–	Ground Connect to reference voltage (0V).
94	V02_0	O	(LSB) Video data 2 output
95	V02_1		
96	V02_2		
97	V02_3		
98	V02_4		
99	GND_04	–	Ground Connect to reference voltage (0V).
100	V02_5	O	Video data 2 output

No.	Pin Name	I/O	Pin Function
101	V02_6	O	Video data 2 output (MSB)
102	V02_7		
103	V02_8		
104	V02_9		
105	VDD_03	–	Power supply Connect to 3.3V.
106	GND_05	–	Ground Connect to reference voltage (0V).
107	V03_0	O	(LSB) Video data 3 output
108	V03_1		
109	V03_2		
110	V03_3		
111	V03_4		
112	GND_06	–	Ground Connect to reference voltage (0V).
113	V03_5	O	Video data 3 output
114	V03_6		
115	V03_7		
116	VCC_S04	–	Power supply Connect to 3.3V.
117	GND_S06	–	Ground Connect to reference voltage (0V).
118	V03_8	O	Video data 3 output (MSB)
119	V03_9		
120	CLK270	O	External clock (27MHz) output Connect to external DA converter, etc.. Polarity is able to set with the register.
121	GND_07	–	Ground Connect to reference voltage (0V).
122	GND_08	–	Ground Connect to reference voltage (0V).
123	GND_PLL0	–	Ground for PLL Connect to reference voltage (0V).
124	VDD_PLL0	–	Power supply for PLL Connect to 3.3V.
125	GND_PLL1	–	Ground for PLL Connect to reference voltage (0V).
126	VDD_PLL1	–	Power supply for PLL Connect to 3.3V.
127	RFCLK	–	Test pin for PLL Connect to GND or VCC (3.3V).
128	TM2	–	Test pin for PLL Connect to GND.
129	GND_09	–	Ground Connect to reference voltage (0V).
130	GND_S07	–	Ground Connect to reference voltage (0V).
131	T	I	Test pin for test mode Connect to 3.3V.
132	W	I	Test pin for writing control Connect to 3.3V.
133	VDD_04	–	Power supply Connect to 3.3V.
134	GND_10	–	Ground Connect to reference voltage (0V).
135	MCLKO	O	Clock (54MHz) output for SGRAM
136	MCLKI	I	Clock (54MHz) return for SGRAM
137	GND_12	–	Ground Connect to reference voltage (0V).
138	MADR_8	O	Address output for SGRAM Connect to A (9) of SGRAM when using 16M-bit SGRAM
139	GND_13	–	Ground Connect to reference voltage (0V).
140	VDD_05	–	Power supply Connect to 3.3V.
141	MADR_7	O	Address output for SGRAM
142	MADR_6		
143	MADR_5		
144	VCC_S05	–	Power supply Connect to 3.3V.
145	GND_S08	–	Ground Connect to reference voltage (0V).
146	MADR_4	O	Address output for SGRAM (LSB)
147	MADR_3		
148	MADR_2		
149	MADR_1		
150	MADR_0		

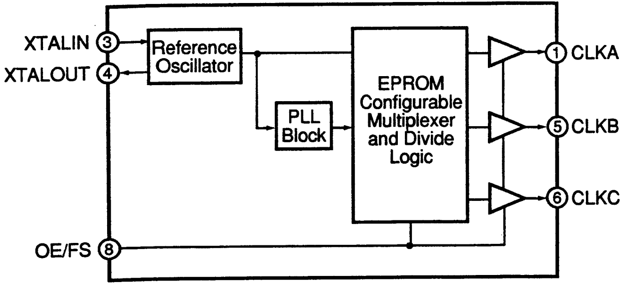
No.	Pin Name	I/O	Pin Function
151	MADR_9	O	Address output for SGRAM Connect to A (10) of SGRAM when using 16M-bit SGRAM. (MSB)
152	GND_14	–	Ground Connect to reference voltage (0V).
153	MRASB	O	Raw address strobe command output for SGRAM
154	MCASB	O	Column address strobe command output for SGRAM
155	MWEB	O	Write enable command output for SGRAM
156	VDD_06	–	Power supply Connect to 3.3V.
157	GND_15	–	Ground Connect to reference voltage (0V).
158	MDQ_08	I/O	Data input and output for SGRAM with pull-up
159	MDQ_23		
160	MDQ_09		
161	MDQ_22		
162	GND_16	–	Ground Connect to reference voltage (0V).
163	MDQ_10	I/O	Data input and output for SGRAM with pull-up
164	MDQ_21		
165	MDQ_11		
166	MDQ_20		
167	MDQ_12		
168	VCC_S06	–	Power supply Connect to 3.3V.
169	GND_S09	–	Ground Connect to reference voltage (0V).
170	MDQ_19	I/O	Data input and output for SGRAM with pull-up
171	MDQ_13		
172	MDQ_18		
173	MDQ_14		
174	GND_17	–	Ground Connect to reference voltage (0V).
175	MDQ_17	I/O	Data input and output for SGRAM with pull-up
176	MDQ_15		
177	MDQ_16		
178	MDQ_24		
179	MDQ_07		
180	MDQ_25		
181	VDD_07	–	Power supply Connect to 3.3V.
182	GND_S10	–	Ground Connect to reference voltage (0V).
183	MDQ_06	I/O	Data input and output for SGRAM with pull-up
184	MDQ_26		
185	MDQ_05		
186	MDQ_27		
187	MDQ_04		
188	GND_18	–	Ground Connect to reference voltage (0V).
189	MDQ_28	I/O	Data input and output for SGRAM with pull-up
190	MDQ_03		
191	MDQ_29		
192	MDQ_02		
193	MDQ_30		
194	MDQ_01		
195	MDQ_31		(MSB)
196	VCC_S07	–	Power supply Connect to 3.3V.
197	GND_S11	–	Ground Connect to reference voltage (0V).
198	MDQ_00	I/O	Data input and output for SGRAM with pull-up (LSB)
199	TEST_0	I	Test mode controll input Connect to GND.
200	T_00	I	Test mode control pin Connect to GND.

No.	Pin Name	I/O	Pin Function
201	GND_19	–	Ground Connect to reference voltage (0V).
202	T_01	I	Test mode pin input Connect to GND.
203	T_02		
204	SGLOCK	O	SSG lock signal output at lock : "H"
205	SRN	I	System reset input L: reset Schmitt input
206	SCLK	I	Clock input of MPU serial interface Lead in SDATA at rising edge. Schmitt input
207	SDATA	I	Data input of MPU serial interface Schmitt input
208	CSB	I	Chip select input for MPU serial interface L: select Schmitt input

■ CY2071ASL-371 (DVDM ASSY : IC965)

- PLL Clock Generator

• Block Diagram


XTALIN ③
XTALOUT ④
Reference Oscillator
PLL Block
EPROM Configurable Multiplexer and Divide Logic
① CLKA
⑤ CLKB
⑥ CLKC
OE/FS ⑧

• Pin Function

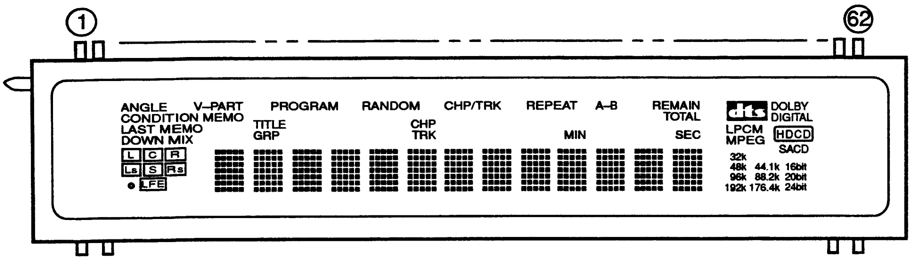
No.	Pin Name	Function
1	CLKA	Configurable clock output
2	GND	Ground
3	XTALIN	Reference crystal input or external reference clock input
4	XTALOUT	Reference crystal feedback
5	CLKB	Configurable clock output
6	CLKC	Configurable clock output
7	VDD	Voltage supply
8	OE/FS	Output control pin, either output enable or frequency select input. (Active-High, internal pull-up resistor to VDD)

7.2.2 DISPLAY

■ VAW1048 (FLKB ASSY : V101)

• FL Display

● External Dimensions


①
(62)
ANGLE
V–PART
CONDITION MEMO
LAST MEMO
DOWN MIX
PROGRAM
TITLE
GRP
RANDOM
CHP/TRK
CHP
TRK
REPEAT
A–B
MIN
REMAIN
TOTAL
SEC
DOLBY
DIGITAL
LPCM
MPEG
HDCD
SACD
L C R
Ls S Rs
LFE
32k
48k 44.1k 16bit
96k 88.2k 20bit
192k 176.4k 24bit

● Pin Assignment

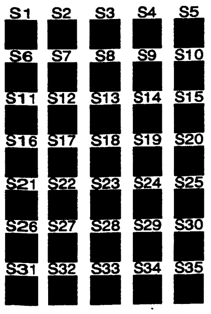
Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Assignment	NL	F1	NP	NL	S38	S37	S36	S35	S34	S33	S32	S31	S30	S29	S28	S27	S26	S25	S24	S23	S22	S21	S20	S19	S18	S17

Pin No.	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Assignment	S16	S15	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3	S2	S1	NL	G15	G14	G13	G12	G11	G10	G9	G8	G7

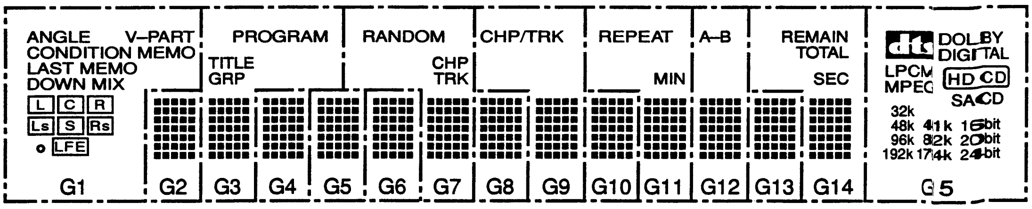
Pin No.	53	54	55	56	57	58	59	60	61	62
Assignment	G6	G5	G4	G3	G2	G1	NL	NP	F2	NL

Note
(1) F1, F2 : Filament
(2) NP : No pin
(3) NL : No Lead
(4) G1 to G15 : Grid
(5) S1 to S38 : Anode

● Anode and Grid Assignment


S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
S16
S17
S18
S19
S20
S21
S22
S23
S24
S25
S26
S27
S28
S29
S30
S31
S32
S33
S34
S35

(G2 to G14)

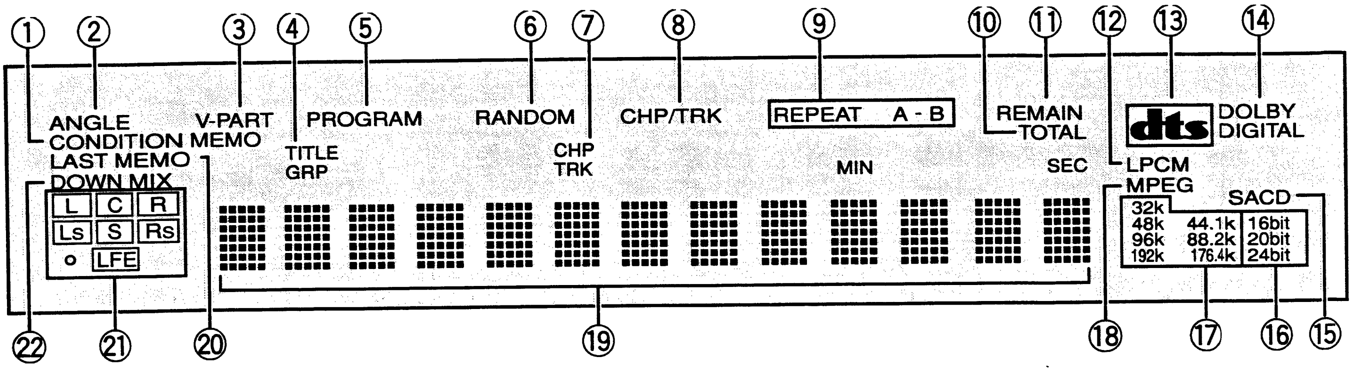

ANGLE
V–PART
CONDITION MEMO
LAST MEMO
DOWN MIX
L C R
Ls S Rs
LFE
PROGRAM
TITLE
GRP
RANDOM
CHP
TRK
CHP/TRK
REPEAT
MIN
A–B
REMAIN
TOTAL
SEC
DOLBY
DIGITAL
LPCM
MPEG
HD CD
SACD
32k
48k 41k 16bit
96k 82k 20bit
192k 174k 24bit
G1
G2
G3
G4
G5
G6
G7
G8
G9
G10
G11
G12
G13
G14
G15

● Anode and Grid Assignment

GA : G2, G4 to G6, G8, G10, G13

	G1	GA	G3	G7	G9	G11	G12	G14	G15
S1	———	S1	S1	S1	S1	S1	S1	S1	———
S2	———	S2	S2	S2	S2	S2	S2	S2	———
S3	———	S3	S3	S3	S3	S3	S3	S3	———
S4	———	S4	S4	S4	S4	S4	S4	S4	———
S5	———	S5	S5	S5	S5	S5	S5	S5	———
S6	———	S6	S6	S6	S6	S6	S6	S6	———
S7	———	S7	S7	S7	S7	S7	S7	S7	———
S8	———	S8	S8	S8	S8	S8	S8	S8	———
S9	———	S9	S9	S9	S9	S9	S9	S9	———
S10	———	S10	S10	S10	S10	S10	S10	S10	———
S11	———	S11	S11	S11	S11	S11	S11	S11	———
S12	———	S12	S12	S12	S12	S12	S12	S12	———
S13	———	S13	S13	S13	S13	S13	S13	S13	———
S14	———	S14	S14	S14	S14	S14	S14	S14	———
S15	———	S15	S15	S15	S15	S15	S15	S15	———
S16	———	S16	S16	S16	S16	S16	S16	S16	———
S17	———	S17	S17	S17	S17	S17	S17	S17	———
S18	———	S18	S18	S18	S18	S18	S18	S18	———
S19	———	S19	S19	S19	S19	S19	S19	S19	———
S20	———	S20	S20	S20	S20	S20	S20	S20	———
S21	———	S21	S21	S21	S21	S21	S21	S21	———
S22	———	S22	S22	S22	S22	S22	S22	S22	———
S23	———	S23	S23	S23	S23	S23	S23	S23	dts
S24	———	S24	S24	S24	S24	S24	S24	S24	**DOLBY DIGITAL**
S25	———	S25	S25	S25	S25	S25	S25	S25	**LPCM**
S26	**ANGLE**	S26	S26	S26	S26	S26	S26	S26	HDCD
S27	**V-PART**	S27	S27	S27	S27	S27	S27	S27	**MPEG**
S28	**CONDITION MEMO**	S28	S28	S28	S28	S28	S28	S28	**SCAD**
S29	**LAST MEMO**	S29	S29	S29	S29	S29	S29	S29	**32k**
S30	**DOWN MIX**	S30	S30	S30	S30	S30	S30	S30	**48k**
S31	L	S31	S31	S31	S31	S31	S31	S31	**44.1k**
S32	C	S32	S32	S32	S32	S32	S32	S32	**16bit**
S33	R	S33	S33	S33	S33	S33	S33	S33	**96k**
S34	Ls	S34	S34	S34	S34	S34	S34	S34	**88.2k**
S35	S	S35	S35	S35	S35	S35	S35	S35	**20bit**
S36	Rs	———	**GRP**	**TRK**	**(A)**	**MIN**	**(C)**	**SEC**	**192k**
S37	○	———	**TITLE**	**CHP**	**CHP/TRK**	**(B)**	**A**	**TOTAL**	**176.4k**
S38	LFE	———	**PROGRAM**	**RANDOM**	———	**REPEAT**	**-B**	**REMAIN**	**24bit**

■ Display



① CONDITION MEMO indicator
Indicates that Condition Memory settings are memorized for the currently loaded DVD-Video disc.

② ANGLE indicator
Indicates Multi-Angle playback is in progress.

③ V-PART indicator
During DVD-Audio disc or DVD-Video disc playback, lights when a video signal is present.

④ TITLE/GRP indicator
Indicates a title or group number is being displayed.

⑤ PROGRAM indicator
Indicates that the program function is on.

⑥ RANDOM indicator
Indicates that the random function is on.

⑦ CHP/TRK indicator
Indicates a chapter or track number is being displayed.

⑧ CHP/TRK indicator
Indicates during chapter or track program play, repeat playor random playback.

⑨ REPEAT (A-B) indicator
Indicates that the Repeat function is on and that the current title, chapter, group, or track is being repeated.

⑩ TOTAL indicator
Indicates that the disc in the player is stopped and **DISPLAY** has been pressed.

⑪ REMAIN indicator
Indicates that the remaining playback time of a title, chapter, group or track is being displayed.

⑫ LPCM
Lights during Linear PCM playback.

⑬ DTS indicator
Indicates DTS audio playback.

⑭ DOLBY DIGITAL indicator
Indicates Dolby Digital audio playback.

⑮ SACD
Lights when a Super Audio CD (SACD) is being played.

⑯ Bit depth display
Displays the bit depth of the Linear PCM audio disc playing.

⑰ Sampling frequency display
Displays the sampling frequency of the Linear PCM audio disc playing.

⑱ MPEG
Lights during playback of MPEG audio.

⑲ Counter display
Displays the playback mode, type of disc, title/chapter/group/track numbers, playback time, etc.

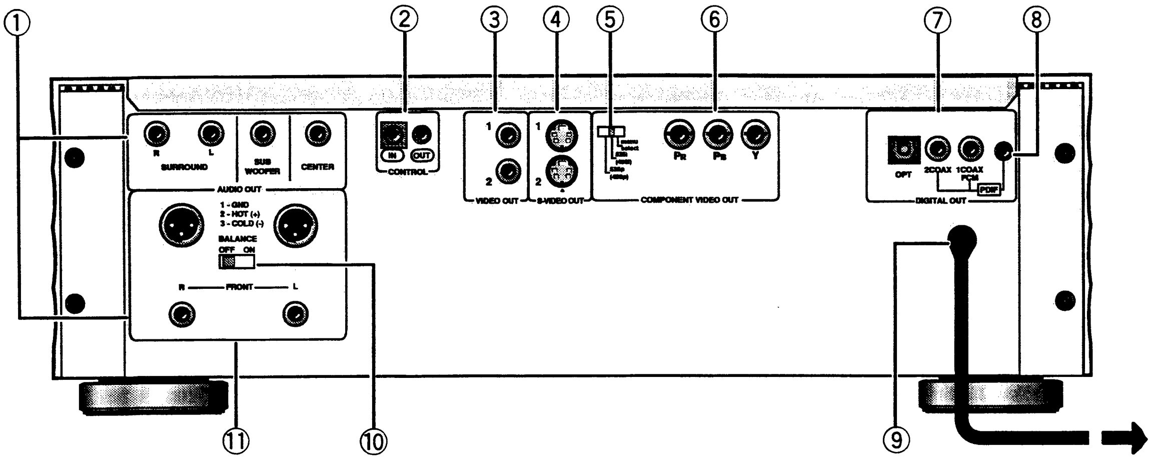
⑳ LAST MEMO indicator
Indicates the Last Memory location is registered in memory for the currently loaded DVD-Video disc or Video CD.

㉑ Program Format indicators
Depending on the audio format recorded on the disc loaded in the player, the following indicators light to show the channels being played back.

L : Left front
C : Center
R : Right front
LS : Left surround
S : Surround (mono)
RS : Right surround
LFE: LFE (Low Frequency Effects) channel

㉒ DOWNMIX indicator
During multichannel audio playback, indicates that the out put signal has been "downmixed" from the original audio source. This is an automatic function performed by the player in order to present the most appropriate audio mix to the speakers present in your system.

■ Rear Panel



* The rear and under section of this appliance are copper plated to ensure quality sound. It may sometimes happen that marks are left during the plating process, but this does not affect performance.

① Multichannel AUDIO OUT jacks

Use to output 6 discrete audio channels of decoded digital audio to a receiver or amplifier with discrete audio inputs.

② CONTROL jacks

Using a commercially available cord with a mini plug (3.5 mm dia. with no resistance) to connect this player's **CONTROL IN** jack to the **CONTROL OUT** jack of another PIONEER component bearing the SR mark, you can control the player as though it were a component in a system (system control).

- If you connect for system control, you cannot operate the player directly. Point the remote control unit at the component (AV amplifier, etc.) connected to the **CONTROL OUT** jack to operate.
- When controlling as a system, be sure to make a connection to the amplifier using an audio or video cord, even when using only digital components.
- For details, refer to the operation manuals of the connected components.

③ VIDEO OUT jacks

Connect to the video input on a TV, monitor, AV amplifier or receiver with video input capability.

④ S-VIDEO OUT jacks

If your TV or monitor has an **S-VIDEO** input, clear picture reproduction is possible by connecting the player to your TV or monitor via the **S-VIDEO** jack.

⑤ Component video output selection switch

Use to set the scanning system (interlace, progressive, menu setting) being used by the TV, monitor, or projector connected to the **COMPONENT VIDEO OUT** jacks.

⑥ COMPONENT VIDEO OUT jacks

If your projection monitor, projector or similar component has component video inputs, you can produce a higher quality picture on your projection monitor or projector by connecting to the component video outputs on this unit. When using these jacks, be sure to set the **component video output selection switch** to the correct position.

⑦ DIGITAL OUT jacks (coaxial(COAX)/optical (OPT))

Use to output the digital audio signal recorded on discs. You can output the digital signal via either coaxial or optical output jack to an AV amplifier or receiver.

⑧ PDIF jack

When using this player with the optional C-AX10 Digital Control Amplifier, connect to this jack using the PDIF cable supplied with the C-AX10.

⑨ Power cord

Use to connect the power cord to the wall outlet.

⑩ BALANCE ON/OFF switch

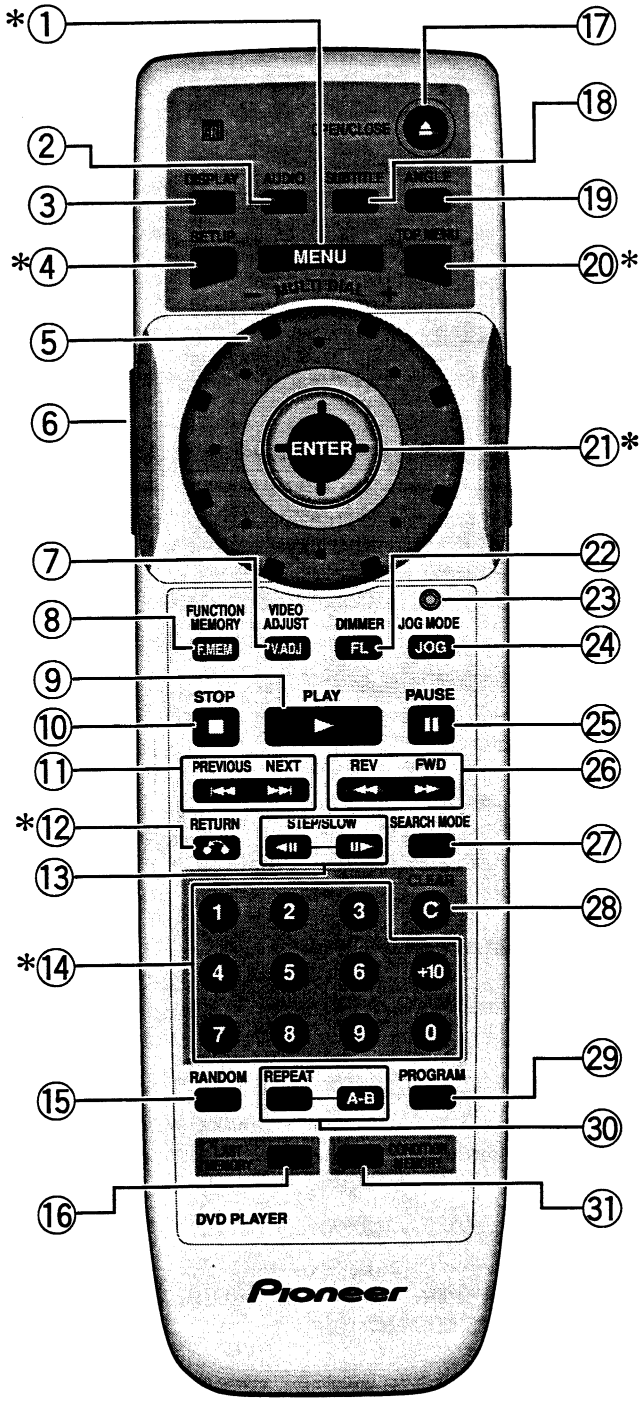
Use to set to **ON** if you are using the balanced audio outputs.

⑪ AUDIO OUT FRONT jacks

Use to output two-channel audio (analog) to the audio stereo inputs on a TV or stereo amplifier. If you are connecting to a receiver that has both digital and analog input jacks for DVD player connection, it may be beneficial to make both connections .

■ Remote Control

(Buttons indicated with * are used for menu operation.)


*①
⑰
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*④
⑳*
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㉑*
⑦
㉒
㉓
⑧
㉔
⑨
⑩
㉕
⑪
㉖
*⑫
㉗
⑬
㉘
*⑭
㉙
⑮
㉚
⑯
㉛
OPEN/CLOSE
DISPLAY
AUDIO
SUBTITLE
ANGLE
SETUP
MENU
TOP MENU
MULTI DIAL
ENTER
FUNCTION MEMORY
F.MEM
VIDEO ADJUST
V.ADJ
DIMMER
FL
JOG MODE
JOG
STOP
PLAY
PAUSE
PREVIOUS
NEXT
REV
FWD
RETURN
STEP/SLOW
SEARCH MODE
CLEAR
C
1
2
3
4
5
6
+10
7
8
9
0
RANDOM
REPEAT
A-B
PROGRAM
DVD PLAYER
Pioneer

① **MENU button***
Use to display or close the DVD menu screen.

② **AUDIO button**
Press repeatedly to select one of the audio languages and/or audio formats programmed on a DVD.
For Video CD and CD, each press changes the audio output as follows.
Stereo, 1/L (Left), 2/R (Right), Stereo, ...

③ **DISPLAY button**
Press during playback to display statistical disc information. Press repeatedly to display different information.

④ **SETUP button***
Press when the player is in either play or stop mode to open and close the Setup screen.

⑤ **MULTI DIAL**
Use to control the rate of playback according to the speed at which **MULTI DIAL** is turned. When the Jog Mode is on, frame by frame scanning in both forword and reverse directions is possible.

⑥ **LIGHTING button (side panel)**
Use to illuminate the main operation buttons on the remote control. When pressed, the buttons light for approximately 6 seconds. This function is convenient for locating the command buttons when the room is dark.

⑦ **VIDEO ADJUST (V.ADJ) button**
Various attributes of the video presentation can be adjusted to suit the program type or personal preferences. Press **VIDEO ADJUST (V.ADJ)** to display the on-screen options.

⑧ **FUNCTION MEMORY (F.MEM) button**
Press to incorporate a menu item into a shortcut list that is stored in memory and can be called up at any time.

⑨ **PLAY ► button**
Press to start disc playback.

⑩ **STOP ■ button**
Press to stop playback. Pressing once enables playback to resume from a point shortly before the location where it was stopped. Pressing twice causes the disc to return to the beginning of the disc when playback starts again.

⑪ **PREVIOUS ⏮/NEXT ⏭ buttons**
During playback, press **PREVIOUS ⏮** to go back to a previous chapter/track and **NEXT ⏭** to advance to the next chapter/track.

⑫ **RETURN ↶ button***
Use to go one menu back (current settings are maintained). Use **RETURN ↶** when you do not want to change the option setting in a menu.

⑬ **STEP/SLOW ◀II/II▶ buttons**
Press **STEP/SLOW II▶** during playback to view slow playback. In pause mode, press **STEP/SLOW II▶** to advance DVDs and Video CDs frame by frame and **STEP/SLOW ◀II** to back up a DVD a few frames at a time.

⑭ **Number buttons (1-9, 0, +10)***
Use to perform direct title/chapter/group/track searches, and to input numerical values.

⑮ **RANDOM button**
Play in random order the groups or tracks on DVD Audio disc, the titles or chapters on DVD Video disc, and the tracks on Video CDs and CDs.

⑯ **LAST MEMORY button**
You can resume DVD-Video or Video CD playback from the point you last watched even if the disc is removed from the player. Press **LAST MEMORY** during playback to set a Last Memory point. When you want to resume playback of that disc, press **LAST MEMORY** in the stop mode and playback starts from the memorized point. Last Memory locations can be stored for up to 5 DVDs and 1 Video CD.

⑰ **OPEN/CLOSE ⏏ button**
Press to open or close the disc tray.

⑱ **SUBTITLE button**
Press repeatedly to select one of the subtitle languages programmed on a DVD or to turn the subtitles off.

⑲ **ANGLE button**
Some DVDs are recorded with various camera angle playback options. Press **ANGLE** repeatedly to display different camera angles.

⑳ **TOP MENU button***
Press to call up the top menu programmed on the DVD. Depending on the DVD, the top menu may be identical to the DVD menu.

㉑ **Cursor control joystick***
Use to move the cursor through the options on menu screens and to change settings.
ENTER button*
Press to implement settings selected with the cursor control joystick or to set items highlighted in a menu.

㉒ **DIMMER (FL) button**
Press to change the brightness of the Display windows and disc illumination in four steps: maximum brightness, medium brightness, minimum brightness, and off. When the Display windows is turned off, the **FL OFF** indicator on the front panel lights.

㉓ **JOG MODE indicator**
Lights when the function of **MULTI DIAL** is to perform frame by frame playback in both directions.

㉔ **JOG MODE (JOG) button**
Press to change the function of **MULTI DIAL** from slow playback and scan to frame by frame playback. When this mode is on, frame by frame playback in both forward and reverse directions is possible.

㉕ **PAUSE II button**
Press to pause playback of a disc. Press again to resume playback.

㉖ **REV ◀◀/FWD ▶▶ (fast reverse/ fast forward) buttons**
During playback of DVD and Video CD, press **FWD ▶▶** to perform fast forward scanning. Press **REV ◀◀** to perform fast reverse scanning of DVD and Video CD. When a SACD or CD is loaded, audio scanning is performed.

㉗ **SEARCH MODE button**
Press to perform a title/chapter/group/track or elapsed time search.

㉘ **CLEAR button**
Works in conjunction with a number of player functions. Use to cancel repeat and random playback, and to edit programs.

㉙ **PROGRAM button**
You can program groups and tracks on a DVD Audio disc, titles and chapters on a DVD Video disc, and tracks on Video CDs or CDs to play back in a desired order.

㉚ **REPEAT (A-B) buttons**
You can repeat groups and tracks on a DVD Audio disc, titles and chapters on a DVD Video disc, and tracks or an entire disc of a SACD, Video CD or CD.

㉛ **CONDITION MEMORY button**
You can store in memory the settings for up to 15 DVDs. Press **CONDITION MEMORY** during DVD playback to memorize the settings.

8.2 SPECIFICATIONS

General

System	DVD system and Compact Disc digital audio system
Power requirements	AC 120 V, 60 Hz
Power consumption	58 W
Weight	24 kg (52 lb. 15 oz.)
Dimensions	440 (W) x 394 (D) x 150 (H) mm (17 $^6/_{16}$(W) x 15 $^9/_{16}$ (D) x 5 $^{15}/_{16}$ (H) in.) (Not including protruding cables, etc.)
Operating temperature	+5°C to +35°C (+36°F to +96°F)
Operating humidity	5% to 85% (no condensation)

S-Video output (2 individual outputs)

Y (luminance) - Output level	1 Vp-p (75 Ω)
C (color) - Output level	286 mVp-p (75 Ω)
Jacks	S-VIDEO jack

Video output (2 individual outputs)

Output level	1 Vp-p (75 Ω)
Jacks	RCA jack

Component video output (Y, PB, PR)

Output level	Y: 1.0 Vp-p (75 Ω) PB, PR: 0.7 Vp-p (75 Ω)
Jacks	BNC jack

Audio output (2 individual outputs)

Output level

During audio output	200 mVrms (1 kHz, –20 dB)
Jacks	RCA jack/BALANCE jack

Multi-channel Audio output (Rear L/R, Center, Subwoofer)

Output level

During audio output	200 mVrms (1 kHz, –20 dB)
Jacks	RCA jack

Digital audio characteristics

Frequency response	4 Hz to 88 kHz (DVD-Audio fs: 192 kHz)
S/N ratio	more than 115 dB
Dynamic range	more than 108 dB
Total harmonic distortion	0.001%
Wow and flutter	Limit of measurement (±0.001% W. PEAK) or lower

Digital output

Optical digital output (2 individual outputs)	Optical digital jack
Coaxial digital output	RCA jack

Other terminals

CONTROL IN	Minijack (3.5 ø)
CONTROL OUT	Minijack (3.5 ø)
PDIF CONTROL OUT	Minijack (3.5 ø)

Accessories

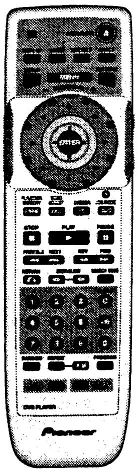
Audio cord	1
Video cord	1
BNC to RCA/phono adapter	3
Remote control unit	1
AA (R6P) dry cell batteries	2
Operating Instructions (this manual)	1

Note

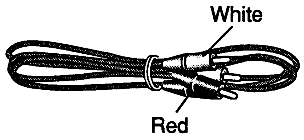
The specifications and design of this product are subject to change without notice, due to improvement.

Accessories

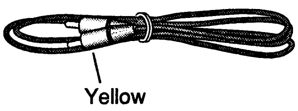
- Remote control Unit
  CU-DV041(VXX2631)



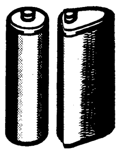
- Audio cord
  (VDE1023) (L=1.5m)



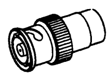
- Video cord
  (VDE1024) (L=1.5m)



- dry cell batteries
  (size AA/R6) × 2



- BNC to RCA/phono adapter
  (VKX1004 x 3)



- Operating Instructions Manual